

**M.Sc. FOOD AND NUTRITION**

**Department of Home Science**

**Lady Irwin College**

**University of Delhi**

**Course Credit Structure-CBCS**

**2018**

**Introduction:**

Department of Home Science hosts M.Sc. Food and Nutrition, PGDDPHN and doctoral programme in Food and Nutrition. M.Sc. Food and Nutrition is offered in two institutions of Delhi University at Lady Irwin College and Institute of Home Economics.

The Department of Food and Nutrition is the first postgraduate department of Lady Irwin College and introduced M.Sc. Food and Nutrition in the year 1958. Presently the department offers one-year Post Graduate Diploma in Dietetics and Public Health Nutrition (PGDDPHN), two year M.Sc. degree in Food & Nutrition and doctoral programme in Food and Nutrition under the Department of Home Science, University of Delhi. Furthermore, Master's degree programme is offered in three areas of specialization namely, Clinical Nutrition, Public Health Nutrition and Food Science and Processing.

**Vision:**

The Department of Food and Nutrition at Lady Irwin College endeavours to achieve excellence in teaching and research for outreach to the community, industry and institutions to ensure promotive health for all.

**Mission:**

The Department of Food and Nutrition strives to achieve academic excellence in the field of nutrition research and development. The aim is to train a cadre of professionals who work as teachers, researchers, public health nutritionists, dietitians, nutrition consultants, food quality control officers and experts in development of innovative food products. The larger objective is creation of nutrition awareness through community outreach for promotion of healthy lifestyle among the population.

**Programme Objectives (POs):**

The objectives of M.Sc. Food and Nutrition programme are:

- To impart the understanding of the concepts of biochemistry, food chemistry and food microbiology
- To enable the students to learn the methods of assessing human nutritional requirements, nutritional assessment and diet planning
- To apply theoretical concepts in laboratory setting as per standard methods in the above mentioned areas
- To understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing
- To acquire skills to undertake systematic research in the area of food science and nutrition

**Programme Specific Outcomes (PSOs):**

- Understand the concepts of biochemistry, food chemistry and food microbiology
- Comprehend methods of assessing human nutritional requirements, nutritional assessment and diet planning
- Apply theoretical concepts in laboratory setting as per standard methods in the above mentioned areas
- Understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing
- Acquire skills to undertake systematic research in the area of food science and nutrition.

**COURSE CREDIT SCHEME**

Semester	Core Courses			Elective Course			Open Elective Course			Total Credits
	No. of papers	Credits (L+T/P)	Total Credits	No. of papers	Credits (L+T/P)	Total Credits	No. of papers	Credits (L+T/P)	Total Credits	
I	4	16 L + 6 T/P	22							22
II	5	16 L + 8 T/P	24				1	2	2	26
III	5	8 L + 8 P	16	2	8 L + 4 P	12				28
IV	1	4	4	3	12 L + 6	18				22
<b>Total Credits for the Course</b>			<b>66</b>			<b>30</b>			<b>2</b>	<b>98</b>

<b>Semester I</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 1 FNCC 101 Research Methods	4		1	5
Core course 2 FNCC 102 Advanced Nutritional Biochemistry and Techniques-I	4	2		6
Core course 3 FNCC 103 Principles of Food Science	4	2		6
Core course 4 FNCC 104 Human Physiology	4		1	5
Total credits in core course	22			
Total credits in Semester I	22			

<b>Semester II</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 5 FNCC 205 Statistics and Computer Application	4	2		6
Core course 6 FNCC 206 Food microbiology and Food Safety	4	2		6
Core course 7 FNCC 207 Advanced Human Nutrition – I	4			4
Core course 8 FNCC 208 Advanced Nutritional Biochemistry and Techniques –II	4			4
Core course 9 FNCC 209 Integrated Nutrition Practical Part A: Nutritional Biochemistry Part B: Advanced Nutrition		4		4
Total credits in core course	24			
Number of Open Electives	Credits in each open elective			
	Theory			Credits
Open Elective 1 : FNOE 201 Community Nutrition Assessment	2			2
Total credits in open elective	2			
Total credits in Semester II 26				

Semester III				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 10 FNCC 310 Advanced Human Nutrition- II	4			4
Core course 11 FNCC 311 Clinical Nutrition	4			4
Core course 12 FNCC 312 Integrated practical		4		4
Core course 13 FNCC 313 Internship		2		2
Core course 14 FNCC 314 Technical Writing and Seminar		2		2
Total credits in core course	16			
Number of elective courses*	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Group A Elective course 1	4	2		6
Group A Elective course 2	4	2		6
Group B Elective course 1	4	2		6
Group B Elective course 2	4	2		6
Group C Elective course 1	4	2		6
Group C Elective course 2	4	2		6
Total credits in elective courses	12			
Total credits in Semester III 28				

**Elective courses for Semester III (Choose two elective papers of one specialization i.e A/B/C)**

Group A Elective Course 1: FNEC 301 A: Perspectives in Public Health Nutrition

Group A Elective Course 2: FNEC 302 A: Institutional Food Management

Group B Elective Course 1: FNEC 301 B: Public Health Nutrition

Group B Elective Course 2: FNEC 302 B: Programme Planning in Public Health Nutrition

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Group C Elective Course 1: FNEC 301 C: Principles of Food Processing

Group C Elective Course 2: FNEC 302 C: Food Processing Technology -I

Semester IV				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 15 FNCC 415 Dissertation/Experiential Learning Project		4		4
Total credits in core course	4			
Number of elective courses**	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Group A Elective Course 3	4	2		6
Group A Elective Course 4	4	2		6
Group A Elective Course 5	4	2		6
Group B Elective Course 3	4	2		6
Group B Elective Course 4	4	2		6
Group B Elective Course 5	4	2		6
Group C Elective Course 3	4	2		6
Group C Elective Course 4	4	2		6
Group C Elective Course 3	4	2		6
Total credits in elective courses	18			
Total credits in Semester IV	22			
TOTAL CREDITS IN SEMESTER I/II/III/IV : 98				

**Elective courses for Semester IV (Choose three elective papers of one specialization i.e A/B/C)**

Group A Elective Course 3: FNEC 403 A: Advanced Clinical Nutrition

Group A Elective Course 4: FNEC 404 A: Nutrition Communication and Diet Counseling

Group A Elective Course 5: FNEC 405 A: Nutrition for Fitness and Sports

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Group B Elective Course 3: FNEC 403 B: Problems, Policies and Programmes in Public Health Nutrition

Group B Elective Course 4: FNEC 404 B: Nutritional Epidemiology

Group B Elective Course 5: FNEC 405 B: Nutrition Communication for Health Promotion

Group C Elective Course 3: FNEC 403 C: Food Processing Technology -II

Group C Elective Course 4: FNEC 404 C: Advanced Food Science

Group C Elective Course 5: FNEC 405 C: Applied Food Microbiology

**SEMESTER I**

<b>Semester I</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 1 FNCC 101 Research Methods	4		1	5
Core course 2 FNCC 102 Advanced Nutritional Biochemistry and Techniques-I	4	2		6
Core course 3 FNCC 103 Principles of Food Science	4	2		6
Core course 4 FNCC 104 Human Physiology	4		1	5
Total credits in core course	22			
Total credits in Semester I	22			

## RESEARCH METHODS THEORY

Marks : 100

Duration: 3 Hrs.

### Course objectives:

To provide students understandings about the basic concepts, approaches and methods in conducting research thereby enabling them to appreciate and critique the nuances of designing a research study as well the ethical dimensions of conducting researches.

### Course Learning Outcomes:

Student will be able to -

1. Demonstrate knowledge of the scientific method, purpose and approaches to research
2. Compare and contrast quantitative and qualitative research
3. Explain research design and the research cycle
4. Prepare key elements of a research proposal
5. Explain ethical principles, issues and procedures

### CONTENTS

### PERIODS

#### UNIT I: Purpose of research

10

- Definition, objectives and significance of research
- Types of research
- Scientific method: induction and deduction
- Research approaches: quantitative, qualitative and mixed
- Issues of relevance and cultural appropriateness

#### UNIT II: Principles of Research in quantitative and qualitative approaches

30

##### *Research design*

- Meaning and need of research design
  - Components and types of research design
  - Issues in design construction
- ##### *Sampling, methods*
- Concept of sampling, key differences in the two approaches
  - Sampling methods, sample size and sampling error
  - Selecting participants and contexts to examine social phenomenon

##### *Data collection and analyses*

- Methods and measurement: Measurement in research, scales and errors in measurement, reliability and validity of measurement tools
- Methods of data collection and types of data
- Immersion, deep engagement, triangulation and reflexivity in qualitative data collection
- Data management and quality control
- Transcription in qualitative data analyses
- Errors in inference – Bias and confounding, reliability and validity issues
- Ensuring reliability and validity in qualitative research

#### UNIT III : The Research Cycle

12

- Systematic literature review and referencing
- Formulating a research problem –Developing research questions and objectives, exploring research context/phenomenon
- Identifying variables, constructing hypotheses
- Deciding research approach and design
- Selection of sample/participants, choice of methods and analysis.
- Writing a research report-Styles and format.

**UNIT IV: Values, Social Responsibility and Ethics in Research 8**

- Ethical principles guiding research: from inception to completion and publication of research
- Ethical issues relating to research participants and the researcher
  - Rights, dignity, privacy and safety of participants
  - Informed consent, confidentiality anonymity of respondents, voluntary participation, harm avoidance
  - Conflicts of interest or bias, Use of inappropriate research methodology, Incorrect reporting, misuse of information

**Teaching Plan:**

**Week 1:** Definition, objectives and significance of research

**Week 2 :**Types of research, Scientific method: induction and deduction

**Week 3 :** Research approaches: quantitative, qualitative and mixed. Issues of relevance and cultural appropriateness

**Week 4:** Meaning and need of research design; types of research design, issues in design construction

**Week 5:** Concept of sampling, key differences in the two approaches, Selecting participants and contexts to examine social phenomenon

**Week 6:** Sampling methods, Sample size and sampling error

**Week 7:** Measurement in research, scales and errors in measurement , reliability and validity of measurement tools

**Week 8:** Methods of data collection and types of data ,Immersion, deep engagement, triangulation and reflexivity in qualitative data collection

**Week 9:** Data management and quality control; Transcription in qualitative data analyses

**Week 10:** Errors in inference – Bias and confounding, reliability and validity issues; Ensuring reliability and validity in qualitative research

**Week 11:**Research Cycle and writing research report

**Week 12:** Ethics in Research

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Demonstrate knowledge of the scientific method, purpose and approaches to research.	Unit transaction through power point presentations,	Assignments, Open book test

2.	Compare and contrast quantitative and qualitative research	Unit transaction through power point presentations and classroom discussion about review and critique of journal articles	Quizzes and objective test
3.	Explain research design and the research cycle	Unit transaction through power point presentations and classroom discussion using research case studies	Assignments, Open book test
4.	Prepare key elements of a research proposal	Unit transaction through power point presentations Students to develop a live research project in groups	Assignments, Open book test Assessment of live project
5	Explain ethical principles, issues and procedures	Unit transaction through power point presentations and classroom discussion about research proposals	Class assignments and quizzes

**Suggested Readings:**

- Aschengrau A, Seage III GR. (2014) *Essentials of Epidemiology in Public Health*. (Third Edition). Sudbury, MA: Jones & Bartlett.
- Bell, J. (1999). *Doing your research project: Guide for first time researchers in social sciences*. New Delhi: Viva Books.
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, CA.: Sage.
- Blaxter, L. Hughes, C., & Tight, K. (1999). *How to research*. New Delhi: Viva Books.
- Bryman, A. (2008). *Social research method*. Oxford: Oxford University Press.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Denscombe, M. (1999). *The good research guide for small-scale social research projects*. New Delhi: Viva Publications.
- Denzin, N. and Lincoln, Y. (Eds.) 2005. *The Sage handbook of qualitative research*. London: Sage.
- Kerlinger, F. N, & Lee, H. B. (2000). *Foundations of behavioral research*. Belmont, Calif.: Wadsworth.

- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier
- Miles, M. & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. London: Sage.
- Rothman K. (2002) *Epidemiology – An Introduction*. New York. NY: Oxford University Press.

## **ADVANCED NUTRITIONAL BIOCHEMISTRY AND TECHNIQUES – I**

### **THEORY**

**Marks: 100**

**Duration: 3 Hrs**

#### **Course Objectives:**

The course will acquaint the students with properties and applications of enzymes, give the knowledge on carbohydrate and lipid metabolism, role of hormones in metabolism and impart knowledge on spectrophotometry.

#### **Course Learning Outcomes:**

Student will be able to:

1. Understand the enzymes, their types, enzyme activity and their diagnostic role
2. Have coherent and systematic knowledge on carbohydrate metabolic regulation
3. Understand the lipid metabolism and its regulation
4. Correlate the action of hormones with metabolic regulation
5. Learn the principles of spectrophotometry

#### **CONTENTS**

#### **PERIODS**

##### **UNIT I Enzymes**

**8**

- Classification of enzymes, Cofactor & Prosthetic groups, Concept of active site.
- Effect of pH, temperature, substrate concentration ( $K_m$  and  $V_{max}$ , Michaelis-Menten equation) & metal ions on enzyme activity
- Isozyme and Ribozyme
- Application of enzymes in diagnostics (SGPT, SGOT, Creatine kinase & Alkaline phosphatase)

##### **UNIT II Carbohydrates**

**12**

- Metabolic regulation of glycolysis, gluconeogenesis, citric acid cycle and glycogen metabolism.
- Pentose phosphate pathway and its significance
- Disorders of carbohydrate metabolism: galactosemia, hereditary fructose intolerance, fructosuria and Glycogen storage disease (Von Gierke, Pompe, Cori and McArdle diseases)

##### **UNIT III Lipids**

**14**

- Fatty acids – Synthesis of saturated and unsaturated fatty acids
- Triacylglycerols – Synthesis
- Phospholipids – Synthesis
- Lipoproteins – Types, synthesis, degradation and clinical significance
- Cholesterol – Synthesis and regulation

- Integration of carbohydrate and lipid metabolism

#### UNIT IV Biosignaling and Hormones

8

- Concept of Hormones
- Six types of signaling mechanisms
- Role of insulin, glucagon & epinephrine in intracellular signaling
- Steroid hormones

#### UNIT V SPECTROPHOTOMETRIC TECHNIQUES

6

- Beer-Lambert's law
- Colorimetry and spectrophotometry
- Atomic absorption spectroscopy
- Flame photometry

#### Suggested Readings:

- Berg JM, Stryer L, Tymoczko JL and Gatto GJ. (2015) *Biochemistry* 8<sup>th</sup> ed. W.H. Freeman.
- Devlin TM. (2010) *Text Book of biochemistry with Clinical Correlations* 7<sup>th</sup> ed. John Wiley and Sons.
- Rodwell VW, Bender DA, Botham KM, Kennelly PJ and Weil PA. (2015) *Harper's Illustrated Biochemistry*. 30<sup>th</sup> ed. McGraw-Hill. Asia.
- Nelson DL and Cox MM. (2017) *Principles of Biochemistry*. 7<sup>th</sup> ed. W.H. Freeman.
- Wilson K and Walker J. (2000) *Practical Biochemistry*. 5<sup>th</sup> ed. Cambridge University Press.

#### Teaching Plan:

**Week 1:** Classification of enzymes, Cofactor & Prosthetic group Concept of active site. Effect of pH, temperature & metal ions on enzyme activity

**Week 2:** Effect of substrate concentration ( $K_m$  and  $V_{max}$ , Michaelis-Menten equation) Isozyme and Ribozyme, Application of enzymes in diagnostics (SGPT, SGOT, Creatine kinase & Alkaline phosphatase)

**Week 3:** Metabolic regulation of glycolysis, gluconeogenesis, citric acid cycle and glycogen metabolism-I

**Week 4:** Metabolic regulation of glycolysis, gluconeogenesis, citric acid cycle and glycogen metabolism-II, Pentose phosphate pathway and its significance

**Week 5:** Test, Disorders of carbohydrate metabolism: galactosemia, hereditary fructose intolerance, fructosuria and Glycogen storage disease (Von Gierke, Pompe, Cori and McArdle diseases)

**Week 6:** Fatty acids – Synthesis of saturated and unsaturated, Triacylglycerols – Synthesis

**Week 7:** Phospholipids – Synthesis, Lipoproteins – Types, synthesis, degradation and significance

**Week 8:** Cholesterol – Synthesis and regulation; Integration of carbohydrate and lipid metabolism

**Week 9:** Concept of Hormones, Signalling mechanisms, Test

**Week 10:** Role of insulin, glucagon & epinephrine in intracellular signalling, Steroid hormones

**Week 11:** Assignment, Beer-Lambert's law, Colorimetry and spectrophotometry

**Week 12:** Atomic absorption spectroscopy, Flame photometry

**Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
I	Classification of enzymes, enzyme activity and diagnostic relevance	Classroom lectures, Experiments on enzyme assay	Short assignment and quiz
II	Metabolic regulation of major carbohydrate metabolic pathways	Classroom lectures, Discussion on important discoveries in metabolism, Practical	Test
III	Lipid metabolism regulation and Lipoproteins	Classroom lectures, short presentations, Practical	Assignment
IV	Mechanisms of hormone signalling	Classroom lectures, short presentations	Test and quiz
V	Principles of Spectrophotometry	Classroom lectures, demonstration on principle and working of spectrophotometer, Practicals	Oral and practical test

**PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs**

**Course Objectives:**

The objective of the course is to acquaint the students with colorimetry in biochemical estimations and give skills on enzyme assays

**Course Learning Outcomes:**

The student will be able to:

1. Acquire skills on preparation of solutions
2. Colorimetric estimation of biochemical molecules
3. Detect the enzymatic activity

**CONTENTS**

**PERIODS**

**UNIT I Solutions**

**2**

- Preparation of normal and molar solutions.

**UNIT II Spectrophotometry** **7**

- Estimation of Phosphorous
- Estimation of Proteins.
- Estimation of Iron.
- Estimation of Cholesterol.
- Estimation of glucose

**UNIT III Enzyme Assays** **3**

- Assay of salivary amylase
- Assay of alkaline phosphatase

**Suggested Readings:**

- Plummer D. T. (2015). An Introduction to Practical Biochemistry. 3rd ed., , Tata McGraw Hill
- Wilson K and Walker J. (2000) Practical Biochemistry 5th ed. Cambridge University Press.

**PRINCIPLES OF FOOD SCIENCE  
THEORY**

**Marks: 100**

**Duration: 3 Hrs**

**Course objectives**

The course aims to provide systematic knowledge and understanding of chemistry of food components like water, proteins, carbohydrates and lipids, various aspects of food product development and systematic interpretation of sensory evaluation and get an insight in to the additives that are relevant to processed food industry for shelf life extension, processing aids and sensory appeal.

**Course Learning Outcomes**

The student will be able to understand:

1. Understand the chemistry of food components like proteins, carbohydrates and lipids.
2. Understand basic concepts of new food product development.
3. Enable to learn about the food additives that are relevant to processed food industry for shelf life extension, processing aids and sensory appeal.

**CONTENTS**

**PERIODS**

**UNIT I Food Chemistry** **26**

- Water: Definition of water in foods, structure, water activity, phase diagram of water, phase transition of food containing water, interaction of water solute and food compounds, water activity and its influence on quality and stability of foods, methods for stabilization of food systems by control of water activity, sorption isotherm, colloidal properties of foods.
- pH: Hydrogen ion concentration in food, oxidation reduction potential of foods and their applications in food systems.
- Protein: Physical, chemical, nutritional and functional properties and interactions with other food constituents
- Enzymes: Classification, application of enzymes in food industry and immobilized enzymes.

- Sugars: Composition and properties of different types of sugars, their application in food systems, crystallization, caramelization, Maillard reaction and its industrial application. Fondants, fudges and icings etc
- Lipids: Properties of fats, functional properties of fats and oils, fat stabilizers, fat deterioration and antioxidants, Emulsions such as mayonnaise, interesterification of fats, auto-oxidation of lipids and rancidity

**UNIT II Basic concepts of new product development 8**

- Stages of product development and standardization, sensory evaluation of foods, packaging, labelling and marketing of new food products.

**UNIT III Food Ingredients and additives 14**

- Food additives- definitions, classification and functions, Preservatives, antioxidants, colours and flavours (synthetic and natural), emulsifiers, sequestrants, humectants, hydrocolloids, sweeteners, acidulants, buffering salts, anticaking agents, etc. - chemistry, food uses and functions in formulations; indirect food additives; toxicological evaluation of food additives.

**Suggested Readings:**

- Branen AL, Davidson PM & Salminen S. (2001) *Food Additives*. 2nd Ed. Marcel Dekker.
- Fellows P J (2002) *Food Processing Technology- Principles and Practices*, 2<sup>nd</sup> Edition. Woodhead Publishing Ltd.
- Food and Agriculture Organization. (1980) *Manual of Food Quality Control. Additive Contaminants Techniques*. Rome.
- Fuller, G.W. (1999) *New Food Product Development. From concept to market place*. CRC press, New York.
- Mahindru, S N (2000) *Food Additives- Characteristics Detection and Estimation*. Tata Mc Graw Hill Publishing Co. Ltd.
- Peter Murano , *Understanding Food Science and Technology* (with InfoTrac) 1st
- *BIS standards for food products and analysis manual*.
- *Manuals of methods of analysis of various food products*, FSSAI, 2016

**Teaching Plan:**

**Week 1:** Water: Definition of water in foods, structure, water activity, phase diagram of water, phase transition of food containing water, interaction of water solute and food compounds, water activity and its influence on quality and stability of foods

**Week 2:** Methods for stabilization of food systems by control of water activity, sorption isotherm, colloidal properties of foods.

**Week 3:** pH: Hydrogen ion concentration in food, oxidation reduction potential of foods and their applications in food systems. Protein: Physical, chemical, nutritional and functional properties and interactions with other food constituents

**Week 4:** Enzymes: Classification, application of enzymes in food industry and immobilized enzymes.

**Week 5:** Sugars: Composition and properties of different types of sugars, their application in food systems, crystallization, caramelization, Maillard reaction and its industrial application

**Week 6:** Lipids: Properties of fats, functional properties of fats and oils, fat stabilizers, fat deterioration and antioxidants, interesterification of fats, auto-oxidation of lipids and rancidity

**Week 7:** Basic concepts of new product development: Stages of product development and standardization

**Week 8:** Sensory evaluation of foods, packaging, labelling and marketing of new food products.

**Week 9:** Food additives- definitions, classification and functions: Preservatives, antioxidants

**Week 10:** Colours and flavours (synthetic and natural), emulsifiers, sequesterants, humectants, hydrocolloids

**Week 11:** Sweeteners, acidulants, buffering salts, anti- caking agents

**Week 12:** Chemistry, food uses and functions in formulations; indirect food additives; toxicological evaluation of food additives.

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Imparting knowledge of Food Chemistry and interaction of food components during food processing	Lectures, discussions and visit to processing industry	<ul style="list-style-type: none"> <li>• Assessment of quality of food ingredient-practical based</li> <li>• Visit report</li> </ul>
2.	Understanding of stage involved in food product development and their commercialization.	Lectures, discussions based on processing methods used in new product development	<ul style="list-style-type: none"> <li>• Presentation/quiz</li> <li>• Practical on assessment of quality parameters of new products.</li> </ul>
3.	Imparting knowledge about use of food ingredients and food additives in food processing industry.	Lectures, discussions based on food additives and their use in different processed food products.	<ul style="list-style-type: none"> <li>• Presentation</li> <li>• Practical on analysis of different additives used in processed food.</li> </ul>

**PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs**

**Course Objectives**

The aim is to learn quality control of raw and processed food products, physical, chemical and nutritional analysis of commonly consumed raw and processed foods and develop an understanding of estimation of various additives in food.

**CONTENTS**

**PERIODS**

1. Proximate composition of foods:	4
Analysis of carbohydrates, proteins, fats, total ash, moisture content, active alcoholic and aqueous acidity in foods, ascorbic acid/dehydroascorbic acid ratio in foods	
2. Estimation of sugar in foods and reducing properties in honey.	1
3. Refractive index, melting point, solidification point of fats & oils.	1
4. Determination of peroxide value and acid value in fats & oils.	2
5. Estimation of polyphenols in foods.	1
6. Analysis of food ingredients and additives	3

**Suggested Readings:**

- Branen AL, Davidson PM & Salminen S. (2001) *Food Additives*. 2nd Ed. Marcel Dekker.
- Fellows P J (2002) *Food Processing Technology- Principles and Practices*, 2<sup>nd</sup> Edition. Woodhead Publishing Ltd.
- Food and Agriculture Organization. (1980) *Manual of Food Quality Control. Additive Contaminants Techniques*. Rome.
- Fuller, G.W. (1999) *New Food Product Development. From concept to market place*. CRC press, New York.
- Mahindru, S N (2000) *Food Additives- Characteristics Detection and Estimation*. Tata Mc Graw Hill Publishing Co. Ltd.
- Peter Murano (2003) *Understanding Food Science and Technology* (with InfoTrac)
- *BIS standards for food products and analysis manual*.
- *Manuals of methods of analysis of various food products*, FSSAI, 2016

## HUMAN PHYSIOLOGY THEORY

Marks : 100

Duration: 3 Hrs.

### Course Objectives:

To understand the normal functioning of various organ systems of the body and their interactions and to be able to comprehend the pathophysiology of commonly occurring diseases

### Course Learning Outcomes:

Student will be able to -

1. Understand the current state of knowledge about the functional organization of the human body.
2. Develop insight of normal functioning of all the organ systems of the body and their interactions.
3. Comprehend the pathophysiology of commonly occurring diseases.
4. Correlate physiology with various disorders and their pathogenesis.

### CONTENTS

### PERIODS

#### UNIT I: Blood and Cardio-Thoracic Physiology

20

- Blood and Plasma Protein -Composition and Function
- Blood formation and factors controlling Erythropoiesis.
- Pathophysiology of Anaemia and Jaundice
- Cardiac cycle, Cardiac output, Heart sounds
- E.C.G. & its interpretation, Heart rate & regulation
- Blood pressure, Hypertension
- Coronary Artery Disease
- Hemorrhage; Compensatory changes after hemorrhage
- Transport and exchange of gases
- Control of Respiration and Respiratory function tests
- Lung volume & Capacities and COPD

#### UNIT II: Excretory Physiology and Exercise Physiology

10

- Urine formation
- Renal function tests
- Acid Base balance
- Pathophysiology of Renal Stones, Urinary Tract Infection, Glomerulonephritis
- Concept of Fitness, Adaptations to exercise
- Energy Metabolism in Sports
- Overview of Diet and Physical Performance

#### UNIT III: Gastrointestinal Physiology

16

- Functions of Stomach, Liver, Pancreas and Gall Bladder
- Composition, function and regulation of :
  - Salivary juice
  - Gastric juice
  - Pancreatic juice
  - Bile juice

- Intestinal juice
- GI hormones
- Pathophysiological overview of some common diseases in relation to Gastrointestinal Tract (Peptic ulcer/GERD, Cholelithiasis, Portal Hypertension, Fatty liver and Liver Cirrhosis)

**UNIT IV: Neuro-Endocrine and Reproductive Physiology**

**14**

- Overview of organization of nervous system
- Effects of Pituitary, Thyroid, Parathyroid, Adrenal and Pancreatic hormones
- Pathophysiology of Diabetes Mellitus, Metabolic Syndrome, Hashimoto's disease. Tetany and Cushing Syndrome
- Physiology of Menstruation and Menopause
- Physiology of Ageing
- Physiology of Pregnancy, Lactation
- Pathophysiology of PCOD and Infertility

**Suggested Readings:**

- Ganong W.F.(2003)-*Review of Medical Physiology*.21st ed. McGraw Hill.
- Guyton A.C. and Hall J.E.(2000)*Textbook of Medical Physiology*.10th ed. India: Harcourt Asia..
- Tortora G.J and Grabowski S.R.(2000) *Principles of Anatomy and Physiology*.9th ed. John Wiley and Sons.Inc.
- West J.B.(1996): *Physiological Basis of Medical Practice*.12th Edition. B. I. Waverly Pvt. Ltd.
- Marieb E.N(2001) *Human Anatomy and Physiology*(5th ed)Pearson Education ,Inc, publishing as Benjamin Cummings.
- Jain A. K (2014) *Human Physiology for BDS*(5th Edition), Publisher: Avichal Publishing Company; ISBN: 9788177394337 .
- Pal G.K and Pal Pravati (2016) *Comprehensive Textbook Of Medical Physiology* (2Vols) Publisher: Jaypee Brothers Medical Pub (P) Ltd. ) ISBN: 5551234080758;

**Teaching Plan:**

**Week 1:** Blood and Plasma Protein -Composition and Function, Blood formation and factors controlling Erythropoiesis, Pathophysiology of Anaemia and Jaundice

**Week 2:** Cardiac cycle, Cardiac output ,Heart sounds, E.C.G. & its interpretation, Heart rate & its regulation

**Week 3:** Blood pressure, Hypertension, Coronary Artery Disease, Hemorrhage, Compensatory changes after hemorrhage

**Week 4:** Transport and exchange of gases, Control of Respiration and Respiratory function test, Lung volume & Capacities and COPD

**Week 5:** Urine formation , Renal function tests, Acid Base balance, Pathophysiology of Renal Stones, Urinary Tract Infection, Glomerulonephritis

**Week 6:** Concept of Fitness, Adaptations to exercise, Energy Metabolism in Sports, Overview of Diet and Physical Performance

**Week 7:** Functions of Stomach, Liver, Pancreas and Gall Bladder, Composition ,function and regulation of Salivary juice, Gastric juice

**Week 8:** Pancreatic juice, Bile juice Intestinal juice; GI hormones

**Week 9:** Pathophysiological overview of some common diseases in relation to Gastrointestinal Tract: Peptic ulcer/GERD, Cholelithiasis, Portal Hypertension, Fatty liver and Liver Cirrhosis

**Week 10:** Overview of organization of nervous system, Physiology of Ageing

**Week11:** Effects of Pituitary, Thyroid, Parathyroid, Adrenal and Pancreatic hormones, Pathophysiology of Diabetes Mellitus, Metabolic Syndrome, Hashimoto’s disease, Tetany and Cushing Syndrome

**Week 12:** Physiology of Menstruation and Menopause, Physiology of Pregnancy, Lactation Pathophysiology of PCOD and Infertility

**Facilitating the Achievement of Course Learning Outcomes**

Unit No	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
Unit I	Understand the structural and functional organisation of Cardiothoracic System	Measurement of Pulse, BP and Oxygen Saturation	<ul style="list-style-type: none"> <li>• Recording of BP by using a Sphygmomanometer</li> <li>• Use of Pulse Oximeter</li> </ul>
Unit II	Understand the structural and functional Organisation Of GIT	Study of permanent slides of GI organs	<ul style="list-style-type: none"> <li>• Histological features of Stomach,</li> <li>• Small and Large intestine</li> <li>• Liver</li> </ul>
Unit III	Comprehend the Structural and Functional organization of Genitourinary System	Study of permanent slides of Genitourinary Tract  Renal Function tests	<ul style="list-style-type: none"> <li>• Histological features of Nephron and Kidney</li> <li>• Dipstick method of urine test for albumin and sugar</li> <li>• Study of Biochemical reports and interpretation with respect to RFT.</li> </ul>
Unit IV	Appreciate the Structural and Functional organization of Neuroendocrine System	Measurement of Blood Sugar	<ul style="list-style-type: none"> <li>• Use of Glucometer</li> <li>• HbA1c values</li> <li>• Interpretation of OGTT</li> </ul>

**SEMESTER II**

<b>Semester II</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 5 FNCC 205 Statistics and Computer Application	4	2		6
Core course 6 FNCC 206 Food microbiology and Food Safety	4	2		6
Core course 7 FNCC 207 Advanced Human Nutrition – I	4			4
Core course 8 FNCC 208 Advanced Nutritional Biochemisrty and Techniques –II	4			4
Core course 9 FNCC 209 Integrated Nutrition Practical Part A: Nutritional Biochemistry Part B: Advanced Nutrition		4		4
Total credits in core course	24			
Number of Open Electives	Credits in each open elective			
	Theory			Credits
Open Elective 1 : FNOE 201 Community Nutrition Assessment	2			2
Total credits in open elective	2			
Total credits in Semester II 26				

**STATISTICS AND COMPUTER APPLICATIONS  
THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives**

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

**Course Learning Outcomes**

Student will be able to-

1. Differentiate between the qualitative and quantitative methods of analysis of data
2. Suitably apply data reduction strategies and illustrate data using various graphical methods
3. Use appropriate parametric and non parametric statistical tests
4. Draw conclusions and interpretations from the analysis of data using various statistical softwares

**CONTENTS**

**PERIODS**

**UNIT I: Introduction to statistics**

**4**

- Basic principles and concepts in statistics
- Orientation to qualitative and quantitative research procedures
- Measurement and computation- Scales of measurement, Reliability and validity

**UNIT II: Organisation and presentation of data**

**10**

- Qualitative and quantitative data- Coding & data reduction strategies
- Organisation of Data: Frequency distributions vs. thematic analysis
- Percentage, percentile ranking and frequencies
- Univariate, bivariate and multivariate tables
- Graphic representation: Graphs, diagrams and charts

**UNIT III: Descriptive Statistics**

**6**

- Applications of descriptive statistics
- Measures of Central tendency and Variability

**UNIT IV: Probability and normal distribution**

**12**

- Basic principles and applications of probability
- Normal curve
- Characteristics of distributions: Skewness, kurtosis
- Testing hypotheses: Levels of significance and p values
- Errors in hypothesis testing: Type I, Type II
- Sampling distribution
- Standard scores, calculation and application

**UNIT V: Statistical tests**

**12**

- Concept of parametric and non-parametric tests, statistical tests and level of

measurement

- Parametric tests of difference: T test, ANOVA and post hoc analysis of significance
- Parametric tests of association: Pearson's product moment r
- Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis
- Non-parametric tests of association: Spearman's r
- Chi-square test
- Regression and its applications
- Tests for ascertaining reliability of instruments

#### UNIT VI: Analysis and interpretation

4

- Guidelines for selecting an appropriate test
- Interpreting results- Statistical inference
- Research Conclusion and recommendations

#### Suggested Readings:::

- Agresti, A. & Franklin C.A. (2009) *Statistics: The Art and Science of Learning from Data* (Second Edition) Boston, MA: Pearson Prentice Hall, ISBN 978-0-13-513199-2
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage.
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.
- Diez, D. M., Barr, C. D., Cetinkaya-Rundel M. (2015). *OpenIntro Statistics*:((Third Edition). CreateSpace Independent Publishing Platform. ISBN-10: 194345003X, ISBN-13: 978-1943450039 <http://www.openintro.org/stat/textbook.php>.
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Fowler, F.J. (1988). *Survey Research Methods. Applied Social Research Methods Series, Vol. 1*. Newbury Park, CA: Sage.
- Greene, S. and Hogan, D. (Eds.). (2005). *Researching Children's Experiences: Methods and Approaches*. London: Sage.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier,
- Minium, E. W., King, B. M., & Bear, G. (1995/2004). *Statistical Reasoning for Psychology and Education*. New York: Wiley and Sons.
- Muijs, D. (2004). *Doing Quantitative Research in Education with SPSS*. London: Sage.

#### Teaching plan:

**Week 1:** Basic principles and concepts in statistics, Orientation to qualitative and quantitative research procedures, Scales of measurement, Reliability and validity

**Week 2:** Qualitative and quantitative data- Coding and data reduction strategies, Organisation of Data: Frequency distributions vs. thematic analysis

**Week 3:** Percentage, percentile ranking and frequencies, Univariate, bivariate and multivariate tables

**Week 4:** Graphic representation: Graphs, diagrams and charts, Applications of descriptive statistics

**Week 5:** Measures of Central tendency and Variability

**Week 6:** Basic principles and applications of probability, Normal curve

**Week 7:** Characteristics of distributions: Skewness, kurtosis, Testing hypotheses: Levels of significance and p values

**Week 8:** Errors in hypothesis testing: Type I, Type II, sampling distribution standard scores, calculation and application

**Week 9:** Concept of parametric and non-parametric tests, statistical tests and level of Measurement, Parametric tests of difference: T test, ANOVA and post hoc analysis of significance

**Week 10:** Parametric tests of association: Pearson's product moment r, Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis

**Week 11:** Non-parametric tests of association: Spearman's r, Chi-square test, Regression and its applications, Tests for ascertaining reliability of instruments

**Week 12:** Guidelines for selecting an appropriate test, Interpreting results- Statistical inference, Research Conclusion and recommendations

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the basic concepts, theories and methods in statistics and Differentiate between the qualitative and quantitative methods of analysis of data	Unit transaction through power point presentations,	Assignments, Open book test
2.	Suitably apply data reduction strategies and illustrate data using various graphical methods	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test
3.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
4.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
5	Use appropriate parametric and non-parametric statistical tests	Unit transaction through power point presentations and classroom discussion	Class assignments and quizzes
6	Draw conclusions and interpretations from the	Unit transaction through power point	Assignments, Open book

	analysis of data	presentations and classroom discussion	test
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**STATISTICS AND COMPUTER APPLICATIONS  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives**

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

**Course Learning outcomes:**

Student will be able to-

1. Identification of various types of data measurement tools/tests/procedures and understanding the concept of standardisation and reliability and validity.
2. Application of various data reduction and coding methods on quantitative and qualitative data.
3. To be able to organise the data and effectively use appropriate quantitative and qualitative statistical softwares for analysis of data
4. Draw conclusions and interpretations from the analysed data and write reports.

**Teaching plan:**

**Week 1, 2 and 3** - Review of Measurement tools/tests/procedures: Standardisation, Reliability, Validity

**Week 4 and 5** - Data reduction strategies and Coding of quantitative and qualitative data

**Week 6, 7, 8 and 9** - Analysis of data using appropriate statistical software (, Qualitative and quantitative open source software)

**Week 10** - Data Visualization

**Week 11 and 12** - Data Interpretation and report writing

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
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1.	<b>Week 1 &amp; 2</b> Identification of various types of data measurement tools/tests/procedures and understanding the concept of standardisation and reliability and validity	Standard tools/test methods and procedures will be reviewed to understand concepts of reliability and validity	Standardised tools will be given to students and activities will be planned to understand the concept of standardisation and determination of reliability and validity
2	<b>Week 3</b> Introduction to computer tools and software in statistical analysis	Open source and other software for quantitative and qualitative data analysis will be reviewed and students will be made familiar about their use	Students gets familiarized with basic functions and tools of any statistical software
3.	<b>Week 4 and 5</b> Application of various data reduction and coding methods on quantitative and qualitative data.	Data collected using standard measurement tools will be organised using appropriate data reduction strategies and coded	Data organisation through spread sheets – manually and using computers. Display of data using graphical representation methods.  Data is collected, coded and formulates tables using appropriate software
3.	<b>Week 6,7 8 and 9</b> To be able to organise the data and effectively use appropriate quantitative and qualitative statistical softwares for analysis of data	Data analysis using suitable quantitative and qualitative software	Assignments to be planned using statistical software for  Data entry and its analysis.  Use of statistical test for analysis
4.	<b>Week 10, 11 and 12</b> Draw conclusions and interpretations from the analysed data and write reports	Data interpretation and Report writing	Assignments on interpretation of the analysed data  Statistical conclusion and Research conclusion

## FOOD MICROBIOLOGY AND FOOD SAFETY

### THEORY

**Marks: 100**

**Duration: 3 Hrs**

#### **Course Objectives:**

The course aims to provide theoretical and practical knowledge about the micro-organisms involved in the food spoilage, infections and intoxications. The course also enables to understand the concept of preservation and microbiological safety in various food operations.

#### **Course Learning Outcomes:**

Student will be able to -

1. Understand the nature of microorganisms involved in food spoilage, food infections and intoxications.
2. Comprehend principles of various preservation and control techniques.
3. Understand microbial safety in various foods operations.

#### **CONTENTS**

#### **PERIODS**

##### **UNIT I: Basic Microbiology**

**16**

- Introduction to microbiology
- Characteristics of microorganisms
- Factors effecting microbial growth

##### **UNIT II: Food Spoilage and Preservation**

**16**

- Cultivation of micro-organisms
- Controlling agents for micro-organism
- Food spoilage
- Principles and methods of food preservation

##### **UNIT III: Beneficial Role of Food Microbes in Health**

**3**

- Importance of normal flora, prebiotics and probiotics
- Fermentation
- Single cell proteins
- Fermented food products

##### **UNIT IV: Food Borne Microbial Diseases**

**9**

- Public health hazards: Food borne infections and intoxications
- Symptoms, mode of transmission and methods of prevention
- Emerging food pathogens

##### **Unit V: Food Safety and Quality Control**

**4**

- Indicator micro-organisms
- Concept of Food Safety Management System, GHP and GMP
- HACCP, ISO 22000
- Food Laws, Regulations and Standards

#### **Suggested Readings:**

- Frazier, W.C. & Westoff, D.C. (2013). *Food Microbiology*. 5<sup>th</sup> Edition. Tata McGraw-Hill Publishing Co. Ltd.
- Garbutt, J. (1997). *Essentials of Food Microbiology*. Arnold London.
- Jay, J.M., Loessner, D.A. & Martin, J. (2006). *Modern Food Microbiology*. 7<sup>th</sup> Edition. Springer
- Banwart, G.J. (2004). *Basic Food Microbiology*. 2<sup>nd</sup> Edition. CBS Publishers and Distributors, India.
- Pelczar, M.J., Chan, E.C.S., Krieg, N. (1993). *Microbiology*. 5<sup>th</sup> Edition. Tata McGraw-Hill Publishing Co. Ltd.
- Prescott, L.M., Harley, J.P. & Klein, D.A. (2017). *Microbiology*. 10<sup>th</sup> Edition. Tata McGraw-Hill Publishing Co. Ltd.
- Mathur, P. (2018). *Food Safety and Quality Control*. 1<sup>st</sup> Edition. Orient Blackswan Private Ltd. India.
- Forsythe, J.S. (2011). *The Microbiology of Safe Food*. 2<sup>nd</sup> Edition. Wiley-Blackwell Publishing.
- Ravishashankar, R. & Jamuna, B. (2015). *Microbial Food Safety and Food Preservation*. CRC Press, Boca Raton.
- *Manual of Methods of Analysis of Foods- Microbiological Testing*. (2012). Lab Manual 14. FSSAI, GoI, New Delhi.

### Teaching Plan:

**Week 1:** Introduction to Microbiology

**Week 2:** Characteristics of Micro-organisms

**Week 3:** Cultivation of Micro-organisms

**Week 4:** Controlling agents for Micro-organisms

**Week 5:** Factors affecting growth of Micro-organisms

**Week 6:** Food spoilage

**Week 7:** Methods of food preservation

**Week 8:** Beneficial role of food microbes

**Week 9:** Food infection and Intoxication, symptoms and mode of transmission

**Week 10:** Food borne illnesses

**Week 11:** Emerging food pathogens

**Week 12:** Concept of FSMS, HACCP, ISO & National and International food laws and standards

### Facilitating the achievement of course learning outcomes

Unit No	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Basic Microbiology	Understand the nature of various groups of micro-organism, their morphology, extrinsic and intrinsic factors affecting their growth.	Simple staining and Differential staining, Assignments and Quizzes

2	Food Spoilage and Preservation	Understand the nature of micro-organism involved in food spoilage	Analysis of Canned product, MBRT, MPN, TPC, Assignments and Quizzes
3	Beneficial role of Food Microbes in Health	Understand the beneficial role of food microbes used for fermentation etc.	Analysis of Curd, Sauerkraut, Probiotic count, Assignments and Quizzes
4	Food Borne Microbial Diseases	Understand the role of microbes in causing public health hazard due to food contamination	Rapid detection test for pathogens, Swab Test, Ringers Test, Assignments and Quizzes
5	Food Safety and Quality Control	Acquaint with various laws and microbiological standards to be maintained during food processing, FSMS, HACCP, ISO, GMP, FSSAI, CODEX	HACCP plan, Assignments and Quizzes

### **PRACTICAL**

**Marks: 50**

**Duration: 3Hrs.**

**Course Objectives:**

To familiarize with the techniques and methods used for cultivation, purification and identification of microbes

**Course Learning Outcomes:**

Student will be able to-

1. Understand the morphology and structural features of various micro-organisms.
2. Comprehend various techniques used for isolation, purification, identification and controlling the growth of micro-organisms
3. Assess the microbial safety of personal hygiene, water, milk and other food products.

**CONTENTS**

**PERIODS**

**UNIT I: Morphology and Structural Features of Various Micro-organisms    2**

- Simple staining
- Differential staining

<b>UNIT II: Various Techniques and Instruments Used in Microbiology</b>	<b>2</b>
• Sterilization and Disinfection	
• Filtration, biosafety cabinets	
<b>UNIT III: Isolation of Microorganisms</b>	<b>3</b>
• Pure Culture Technique	
• Standard Plate Count Method	
<b>UNIT IV: Microbiological Analysis For</b>	<b>5</b>
• Water (Most Probable Number)	
• Milk (Methylene Blue Reduction Test)	
• Curd and probiotic count	
• Adulteration test for various food products.	
<b>UNIT V: Biochemical Test</b>	<b>4</b>
• Rapid detection test	
• Phenol co-efficient method	
• Zone of Inhibition technique	
<b>UNIT VI: HACCP Plan</b>	<b>1</b>
• HACCP plan for a food process	

**Suggested Readings:**

- Bell, C., Neaves, P. & Williams, A.P. (2005). *Food Microbiology and Lab Practice*. Wiley Press.
- Yousef, A.L. (2003). *Food Microbiology. A Laboratory Manual*. Wiley Inter-Science New Jersey.
- Benson, H.J. (2002). *Microbiological Application. 8<sup>th</sup> Edition*. Tata McGraw Hill.
- Mortimore & Wallace. (2013). *HACCP: A Practical Approach. 3<sup>rd</sup> Edition*. Springer Publication.
- Cappuccino & Sherman. (2007). *Microbiology: A laboratory Manual. 7<sup>th</sup> Edition*. Pearson Education Inc.
- Hoorfar, J. (2011). *Rapid Detection, Characterization and Enumeration of Food Borne Pathogens*. American Society for Microbiology, Washington, USA.
- *Drinking Water Specification- Indian Standard. (2012). 2<sup>nd</sup> Revision*. IS 10500:2012. Bureau of Indian Standard, Manak Bhawan, New Delhi, India.
- *Manual of Methods of Analysis of Foods- Microbiological Testing. (2012)*. Lab Manual 14. FSSAI, GoI, New Delhi.

**ADVANCED HUMAN NUTRITION -I**

**THEORY**

**Marks : 100**

**Duration: 3 Hrs**

**Course Objectives:**

To understand how Dietary Reference Intakes are derived for the population. To appreciate the role of nutrition in cellular and physical growth and assess nutritional status.

**Course Learning Outcomes:**

After doing this course the student will be able to:

1. Critically evaluate and derive requirements for specific macronutrients.
2. Understand critical periods in growth and development and impact of malnutrition.
3. Assess the nutritional status of children and adults.
4. Appreciate implications of poor dietary and lifestyle practices.

**CONTENTS**

**PERIODS**

**UNIT I: Human Nutrient Requirements – Macronutrients**

**18**

- Historical perspective of nutrient requirements
- Methods of assessment of nutrient needs – a critical review
- Critical evaluation of sensitive methods and derivations of requirements and dietary allowances of macronutrients for all age groups:
  - Energy
  - Carbohydrates and dietary fibre
  - Proteins and amino acids
  - Lipids and fatty acids
  - Water
- Critical evaluation of national and international nutrient allowances; factors affecting the requirements.
- Protein quality and its assessment

**UNIT II: Growth and Development through the Life Cycle**

**10**

- Different aspects of growth – cellular to physical
- Determinants of growth and development
- Changes in body composition throughout the life cycle
- Impact of altered nutrition on growth and development
- Maternal malnutrition and pregnancy outcome
- Malnutrition and cognitive development

**UNIT III: Assessment of Nutritional Status**

**10**

- Critical overview of various methods of nutritional assessment – Diet surveys, anthropometric measurements, biochemical and clinical. Rapid methods of assessment
- Analysis and Interpretation of results
- National and International Growth Standards/References, development of WHO Child Growth Standards
- National Nutrition Surveys

**UNIT IV: Nutrition transition**

**10**

- Changing trends in life style and dietary patterns in population groups and their implications on nutritional status and disease.
- Triple burden of malnutrition
- Improving nutritional quality of diets- fortification, bioavailability of nutrients, dietary diversity, new food basket

### **Suggested Readings:**

- Bamji, M.S., Krishnaswamy K. Brahmam G.N.V. (Eds). (2017). Textbook of Human Nutrition. 4th Edition. New Delhi : Oxford and IBH Publishing Co. Pvt. Ltd.
- Cameron N. (2002). Human Growth and Development. USA: Academic Press, Elsevier Science.
- FAO/WHO/UNU (2004). Human Energy Requirements. Report of a Joint Expert Consultation. Rome.
- Gibson R S. (2005). Principles of Nutritional Assessment. 2nd ed. Oxford University Press.
- ICMR (2010). Nutrient Requirements and SUGGESTED Dietary Allowances for Indians and its revised documents. New Delhi. ICMR.
- Proceedings of NFI-WHO (SEARO) Symposium. (2006). Nutrition in Developmental Transition. New Delhi: NFI.
- Report of a WHO Expert Committee. (1995). Physical Status: The Use and Interpretation of Anthropometry. Tech Rep Series 854, Geneva: WHO.
- WHO (2006). WHO Child Growth Standards. Geneva : WHO.
- WHO (2006). WHO Child growth standards: Length/height for age, weight for age, weight for length, weight for height and body mass index. Available at <http://www.who.int>.
- Report of a joint WHO/FAO/UNU expert consultation (2007). Protein and Amino acid Requirements in Human Nutrition. WHO Technical Report Series 935. Geneva: WHO.
- WHO (2007). WHO Reference Data for Children and Adolescents (5-19 years). Available at <http://www.who.int/growthref/en/>
- WHO (2009). WHO Child growth standards: Growth velocity based on weight, length and head circumference. Available at <http://www.who.int>

### **Teaching Plan:**

**Week 1:** Historical perspective of nutrient requirements and definitions, critical overview of methods of assessing requirements, derivation of energy requirements

**Week 2:** Derivation of requirements of energy, carbohydrates, fibre

**Week 3:** Derivation of requirements of energy, lipids

**Week 4:** Derivation of requirements of energy, protein

**Week 5:** Derivation of requirements of energy, water, protein quality

**Week 6:** Different aspects of growth – cellular to physical, measurement of growth

**Week 7:** Determinants of growth and development, changes in body composition through lifecycle and impact of altered nutrition on growth and development

**Week 8:** Impact of malnutrition on pregnancy outcome and cognitive development, triple burden of malnutrition

**Week 9:** Critical overview of various methods of nutritional assessment, analysis, interpretation – Diet surveys, anthropometric measurements

**Week 10:** Critical overview, analysis, interpretation of biochemical and clinical methods, rapid methods of assessment

**Week 11:** Growth Standards and References, National nutrition surveys, nutrition transition

**Week 12:** Impact of nutrition transition, improving diet quality

### Facilitating the Achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Critically evaluate the methodology and derivation of requirements for specific macronutrients	Discussion, PowerPoint presentations, Videos of methods of assessment	Class Quiz, Assignment
2.	Understand critical periods in growth and development and impact of malnutrition	Reading of research on impact of malnutrition on growth, discussion of findings of classical studies, Power Point presentations	Class quiz
3.	Assess the nutritional status of children and adults	Power Point presentation, discussion, demonstration of software for analysis of anthropometric data	Presentations by students on sources of data on nutritional status Assignment on formulation of a tool for diet survey
4.	Appreciate implications of poor dietary and lifestyle practices	Power Point presentations, Discussion on nutrition transition	Presentations by students of research papers on nutrition transition and its consequences

### ADVANCED NUTRITIONAL BIOCHEMISTRY AND TECHNIQUES – II THEORY

**Marks: 100**

**Duration: 3 Hrs**

#### **Course Objectives:**

The aim of the course is to understand the basics of genetic material, get an insight into DNA and RNA metabolism and understand the principles and use of techniques for purification and estimation of DNA and protein

#### **Course Learning Outcomes:**

Student will be able to

1. Understand the purine, pyrimidine, iron and heme metabolism
2. Develop insight into structure, functioning and repair of DNA
3. Learn basics of RNA and translation process
4. Comprehend the principles and application of various chromatographic and electrophoretic techniques

#### **UNIT I Nucleotides, Iron and Heme Metabolism**

**12**

- Structure of Nucleotides.
- De novo synthesis of purines & pyrimidines nucleotides, regulation and salvage pathways
- Catabolism of purine and pyrimidine nucleotides
- Disorders of purine catabolism (Lesch Nyhan syndrome, Gout, Adenosine deaminase deficiency, Hypouricemia)
- Iron metabolism- Mechanisms of transport and cellular uptake
- Basic concept of Heme biosynthesis and degradation

**UNIT II DNA Organization, Replication and Repair** **16**

- Basic structure of DNA
- DNA organization basic , replication and repair
- Regulation of gene expression (lac operon)
- Genetic mutations
- Basic principles in Nutrigenomics

**UNIT III RNA and Protein Synthesis** **12**

- Basic structure of RNA
- RNA synthesis and processing (in eukaryotes)
- Genetic code
- Translation
- Post translational modification

**UNIT IV Biochemical Techniques** **8**

- Chromatographic Techniques
  - Gel filtration
  - Ion exchange chromatography
  - Affinity Chromatography
  - HPLC
  - Gas Chromatography
- Electrophoretic Techniques
  - Electrophoresis-Polyacrylamide gel eletrophoresis (Native and SDS)
  - Agarose gel electrophoresis

**SUGGESTED READINGS::**

- Berg J M, Stryer. L, Tymoczko JL and Gatto, GJ. (2015) *Biochemistry* 8th ed. W.H. Freeman.
- Devlin TM. (2010) *Text Book of biochemistry with Clinical Correlations* 7th ed. John Wiley and Sons.
- Rodwell VW, Bender DA, Botham KM, Kennelly PJ and Weil PA. (2015) *Harper's Illustrated Biochemistry*. 30th ed. McGraw-Hill. Asia.
- Nelson DL and Cox MM. (2017) *Principles of Biochemistry*. 7th ed. W.H. Freeman.
- Wilson K and Walker J. (2000) *Practical Biochemistry* 5th ed. Cambridge University Press.

**Teaching Plan**

- Week 1:** Structure of Nucleotides. De novo synthesis of purines & pyrimidines nucleotides, regulation and salvage pathways-I
- Week 2:** De novo synthesis of purines & pyrimidines nucleotides, regulation and salvage pathways-II; Catabolism of purine nucleotides
- Week 3:** Catabolism of pyrimidine nucleotides; Disorders of purine catabolism (Lesch Nyhan syndrome, Gout, Adenosine deaminase deficiency, Hypouricemia)
- Week 4:** Iron metabolism- Mechanisms of transport and cellular uptake, Basic concept of Heme biosynthesis and degradation
- Week 5:** Test, Basic structure of DNA ; DNA organization, replication and repair
- Week 6:** Regulation of gene expression (lac operon); Genetic mutations
- Week 7:** Basic structure of RNA; RNA synthesis and processing (in eukaryotes); Genetic code
- Week 8:** Translation; Post translational modification
- Week 9:** Basic principles in Nutrigenomics; Gel filtration; Ion exchange chromatography
- Week 10:** Affinity Chromatography; HPLC; Gas Chromatography
- Week 11:** Electrophoresis-Polyacrylamide gel electrophoresis (Native and SDS), Assignment
- Week 12:** Agarose gel electrophoresis, test

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
I	Purine, pyrimidine, iron and heme metabolism	Classroom lectures, Presentations	Test
II	Structural organization, function and repair of DNA	Classroom lectures, Practical	Assignment, Practical test
III	RNA synthesis and processing, Protein translation	Classroom lectures, Practical	Test
IV	Principles and use of chromatography and electrophoresis	Classroom lectures, Demonstration of instruments	Quiz Assignment

**INTEGRATED NUTRITION PRACTICAL WITH PART A: NUTRITIONAL BIOCHEMISTRY PART B: ADVANCED HUMAN NUTRITION.**

**Marks : 100**

**Duration: 3 Hrs**

**PART -A -\_ADVANCED NUTRITIONAL BIOCHEMISTRY AND TECHNIQUES – II**

**Course Objectives:**

The aim of the practical is to understand principle and preparation of buffer solutions , understand various methods of quantitative estimations of biomolecules and gain information on various blood analysis tests

**Course Learning Outcomes:**

Student will be able to

1. Gain skill on preparation of buffers
2. Learn DNA and RNA estimation in solutions
3. Comprehend the application of chromatography and electrophoresis in biochemistry
4. Knowledge on blood analysis

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I Buffers</b>	<b>3</b>
<ul style="list-style-type: none"><li>• Preparation of acidic buffers.</li><li>• Preparation of basic buffers</li></ul>	
<b>UNIT II Spectrophotometry</b>	<b>3</b>
<ul style="list-style-type: none"><li>• DNA estimation</li><li>• RNA estimation</li></ul>	
<b>UNIT III Chromatographic Techniques</b>	<b>2</b>
<ul style="list-style-type: none"><li>• Separation of amino acids.</li></ul>	
<b>UNIT IV ELECTROPHORESIS (DEMONSTRATION)</b>	<b>2</b>
<ul style="list-style-type: none"><li>• Agarose gel electrophoresis.</li><li>• SDS polyacrylamide gel electrophoresis</li></ul>	
<b>UNIT IV BLOOD ANALYSIS</b>	<b>2</b>
<ul style="list-style-type: none"><li>• Survey of pathological laboratory to obtain the information on blood and serum analysis tests.</li></ul>	

**Suggested Readings:**

- Plummer D. T., (2015) *An Introduction to Practical Biochemistry*. 3<sup>rd</sup> ed., Tata McGraw Hill
- Wilson K and Walker J. (2000) *Practical Biochemistry* 5<sup>th</sup> ed. Cambridge University Press.

**PART- B ADVANCED HUMAN NUTRITION**

**Marks : 50**

**Duration: 3 Hrs**

**Course Objectives:**

To learn techniques of measurement of energy expenditure, protein quality, nutritional status.

**Course Learning Outcomes:**

After completing this course, the student will be able to:

1. Measure energy expenditure in individuals

2. Assess the protein quality of diets and dishes
3. Assess nutritional status of individuals and groups.

CONTENTS	PERIODS
<b>UNIT I: Energy Expenditure</b>	<b>3</b>
<ul style="list-style-type: none"><li>• Oxygen consumption measurements / Heart rate measurements.</li><li>• Computing energy expenditure and energy balance – minute to minute record, GPAQ.</li></ul>	
<b>UNIT II: Assessment of Protein Quality</b>	<b>2</b>
<ul style="list-style-type: none"><li>• Calculation of NDpCal % and PDCAAS of diets and dishes.</li></ul>	
<b>UNIT III: Assessment of Nutritional Status</b>	<b>7</b>
<ul style="list-style-type: none"><li>• Dietary surveys – 24 hour recall, Food frequency questionnaire. Standardization of recipes</li><li>• Anthropometry – Height, weight, waist circumference, hip circumference, MUAC, skin fold measurements. Analysis of data using WHO AnthroPlus software</li><li>• Body composition – bioelectrical impedance method</li><li>• Demonstration of cognition tests (to measure intelligence) relevant to the study of nutrition.</li></ul>	
<b>UNIT IV: Field Visits</b>	<b>1</b>
<ul style="list-style-type: none"><li>• To institutions conducting research in human nutrition and report writing of the visits</li></ul>	

#### Suggested Readings:

- Cameron N. (1984). *The measurement of Human Growth*. London and Sydney: Croom Helm Ltd.
- Gibson R S. (2005). *Principles of Nutritional Assessment*. 2nd ed. Oxford University Press.
- WHO (2006). *WHO Child growth standards: Length/height for age, weight for age, weight for length, weight for height and body mass index*. Available at <http://www.who.int>.
- Report of a joint WHO/FAO/UNU expert consultation (2007). *Protein and Amino acid Requirements in Human Nutrition*. WHO Technical Report Series 935. Geneva: WHO.
- WHO (2007). *WHO Reference Data for Children and Adolescents (5-19 years)*. Available at <http://www.who.int/growthref/en/>
- WHO (2009). *WHO Child growth standards: Growth velocity based on weight, length and head circumference*. Available at <http://www.who.int>

### Community Nutrition Assessment THEORY

**Marks: 50**

**Duration: 3 hrs**

#### Course Objectives:

The purpose of this course is to enable the students to understand the concept and methods of nutritional status assessment of a community. This will help them to comprehend the nutrition concerns among communities, the correct screening criteria for malnutrition, along with strategies to combat and prevent them.

### Course Learning Outcomes:

On completion of the course, students are expected to be able to –

1. Understand the concept and purpose of nutritional status assessment in community setting.
2. Explain nutritional concerns among vulnerable sections of the community and strategies to combat them.
3. Gain knowledge with regard to standard methods and techniques for assessing nutritional status.
4. Be familiar with the use of indices and indicators for screening and consequent identification of malnutrition in the community

### CONTENTS

### PERIODS

#### Unit 1: Introduction to Nutritional status assessment

6

- Definition of nutritional status
- Purpose of nutritional status assessment in community setting
- Significance of standardised methods and techniques for assessing nutritional status
- Major nutritional concerns among vulnerable sections of the community and National strategies to combat malnutrition.

#### Unit 2: Methods of community nutritional assessment

14

- Clinical examination, Anthropometry, Biochemical and Biophysical methods
- Measurement tool techniques and errors
- Standardization of methods
- Data recording, analysis and interpretation
- Use, plotting and interpretation of growth chart
- Rapid assessment procedures for community nutrition assessment and nutrition programme planning and evaluation
- Dietary methods: 24 hour recall, Food Frequency Questionnaire
- Ecological variables
- Vital health statistics: IMR, MMR, Under 5 Mortality rates
- National/ regional nutrition and health surveys

#### Unit 3: Screening for identification of Malnutrition in the community

4

- Indices, indicators and their interpretation

### Suggested Readings:

- Jelliffe DB. The Assessment of the Nutritional Status of the Community. WHO Monograph. World Health Organization, Geneva 1966; 53.
- Jelliffe DB & Jelliffe E F P (1989). *Community nutritional assessment with special reference to less technically developed countries*. Oxford Medical Publications. Oxford University Press, Oxford, UK
- Gibson R S. (2005). *Principles of Nutritional Assessment*. 2nd ed. Oxford University Press.
- WHO (2006). *WHO Child growth standards: Length/height for age, weight for age, weight for length, weight for height and body mass index (2006)*. Available at <http://www.who.int>.
- WHO (2009). *WHO Child growth standards: Growth velocity based on weight, length and head circumference* Available at <http://www.who.int>

- WHO (2007). *WHO Reference Data for Children and Adolescents (5-19 years)*. WHO reference. Available at <http://www.who.int/growthref/en/>
- Park, K. (2017) *Park's Textbook of Preventive and Social Medicine*, 24th ed. Jabalpur M/s. Banarsidas Bhanot.
- Dietary Guidelines for Indians (2011). *Dietary Guidelines for Indians: A manual* . second Edition , NIN.
- Gibney M.J., Margetts, B.M., Kearney, J. M. Arab, I., (Eds) (2004) *Public Health Nutrition*, NS Blackwell Publishing.
- IFCT (2017). *Indian food composition table*, NIN.
- Ross A C. (2012) *Nutrition in health and disease*, Lippincott Williams & Wilkins.
- Shils ME. (1988) *Nutrition in health and disease*, (Eds), Lippincott Williams & Wilkins.

**Teaching Plan:**

**Week 1-3 :** Introduction to Nutritional status assessment

**Week 4-10:** Methods of community nutritional assessment

**Week 11-12:** Methods of community nutritional assessment

**SEMESTER –III**

Semester III				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 10 FNCC 310 Advanced Human Nutrition- II	4			4
Core course 11 FNCC 311 Clinical Nutrition	4			4
Core course 12 FNCC 312 Integrated practical		4		4
Core course 13 FNCC 313 Internship		2		2
Core course 14 FNCC 314 Technical Writing and Seminar		2		2
Total credits in core course	16			
Number of elective courses*	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Group A Elective course 1	4	2		6
Group A Elective course 2	4	2		6
Group B Elective course 1	4	2		6
Group B Elective course 2	4	2		6
Group C Elective course 1	4	2		6
Group C Elective course 2	4	2		6
Total credits in elective courses	12			
Total credits in Semester III 28				

**Elective courses for Semester III (Choose two elective papers of one specialization i.e A/B/C)**

Group A Elective Course 1: FNEC 301 A: Perspectives in Public Health Nutrition

Group A Elective Course 2: FNEC 302 A: Institutional Food Management

Group B Elective Course 1: FNEC 301 B: Public Health Nutrition

Group B Elective Course 2: FNEC 302 B: Programme Planning in Public Health Nutrition

***Department of Home Science, University of Delhi***

Group C Elective Course 1: FNEC 301 C: Principles of Food Processing

Group C Elective Course 2: FNEC 302 C: Food Processing Technology -I

## ADVANCED HUMAN NUTRITION –II

### THEORY

**Marks : 100**

**Duration: 3 Hrs**

#### **Course Objectives:**

To understand the basis of derivation of Dietary Reference Intakes for micronutrients and how requirements change under special conditions.

#### **Course Learning Outcomes:**

After this course the student should be able to:

1. Critically evaluate the methodology and derivation of requirements for micronutrients.
2. Understand nutritional management in special conditions.
3. Appreciate importance of nutrition immunity interactions and their operational implications.
4. Track emerging concepts in the field of nutrition.

#### **CONTENTS**

#### **PERIODS**

#### **UNIT I: Human Nutrient Requirements - Micronutrients** **22**

Critical evaluation of sensitive methods and derivations of requirements and dietary allowances of micronutrients for all age groups:

- Water soluble vitamins
- Fat soluble vitamins
- Minerals and trace elements
- Critical evaluation of national and international nutrient allowances; factors affecting the requirements.
- Critically evaluate national and international dietary guidelines.

#### **UNIT II: Interactions of Nutrition, Immunity and Infection** **8**

- Host defense mechanisms and nutrients essential in the development of immune system.
- Effect of infections on the nutritional status of an individual.
- Nutrient deficiencies and excesses affecting the immuno-competence and to infections.
- Operational implications.

#### **UNIT III: Nutrition in Special Conditions** **6**

- Extreme temperatures - low and high
- High altitude
- Space nutrition and food systems
- Introduction to sports nutrition

#### **UNIT IV: Emerging Concepts in Human Nutrition** **12**

- Nutrigenomics
- Functional foods and bioactive compounds
- Nutraceuticals
- Genetically modified foods and advances in biotechnology

#### **Suggested Readings:**

- Bamji, M.S., Krishnaswamy K. Brahmam G.N.V. (Eds.) (2017). *Textbook of Human Nutrition*. 4th Edition. New Delhi : Oxford and IBH Publishing Co. Pvt. Ltd.

- Chadha R., Mathur P. (Eds.) (2015). *Nutrition: A Lifecycle Approach*. New Delhi: Orient Blackswan
- FAO/WHO. (2004). *Vitamin and Mineral Requirements in Human Nutrition*. Report of a Joint Expert Consultation.
- FSSAI (2016). *Food Safety and Standards (Food or Health Supplements, Nutraceuticals, Foods for Special Dietary Uses, Foods for Special Medical Purpose, Functional Foods and Novel Food) Regulations*. <http://www.fssai.gov.in/home/fss-legislation/fss-regulations.html>
- ICMR (2010). *Nutrient Requirements and SUGGESTED Dietary Allowances for Indians and its revised documents*. New Delhi. ICMR.
- Simopoulos A.P., Ordovas J.M. (Eds.) (2004). *Nutrigenetics and Nutrigenomics*. USA: Karger

**Teaching Plan:**

**Week 1:** Derivation of requirements of thiamine, calcium, selenium

**Week 2:** Derivation of requirements of riboflavin, iron, magnesium

**Week 3:** Derivation of requirements of niacin, zinc, iodine, sodium, potassium

**Week 4:** Derivation of requirements of pyridoxine, other trace minerals

**Week 5:** Derivation of requirements of folic acid, national and international dietary guidelines

**Week 6:** Derivation of requirements of vitamin B12, host defence mechanisms, effect of infection on nutritional status

**Week 7:** Derivation of requirements of vitamin A, effect of malnutrition on immunity, operational implications

**Week 8:** Derivation of requirements of vitamins A and D, nutrition in extreme hot, cold locations and high altitude

**Week 9:** Derivation of requirements of vitamins D and E, space food systems and space nutrition, sports nutrition

**Week 10:** Derivation of requirements of vitamin K, sports nutrition, nutraceuticals

**Week 11:** Functional foods, GM foods and other advances in biotechnology

**Week 12:** Nutrigenomics

**Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Critically evaluate the methodology and derivation of requirements for specific micronutrients	Discussion, PowerPoint presentations, Videos of methods of assessment	Class Quiz, Assignment
2.	Understand nutritional management in special conditions	Reading of research on sports nutrition and derivation of nutrient requirements in special conditions, discussion	Class quiz

		of findings, Power Point presentations, videos of space food systems	
3.	Appreciate importance of nutrition immunity interactions and their operational implications	Power Point presentation, discussion on operational implications	Presentations by students on studies linking nutrition to immunity
4.	Track emerging concepts in the field of nutrition	Power Point presentations, Discussion, videos	Presentations by students on research papers linked to the relevant topics

### CLINICAL NUTRITION THEORY

**Marks: 100**

**Duration: 3 Hrs**

**Course Objectives:**

To understand the nutrition assessment, planning, implementation, monitoring and follow up in nutrition care process, the causative factors and metabolic changes in various diseases/disorders and acquire knowledge on the principles of diet therapy and comprehend principles of dietary counseling and the rationale of prevention of various diseases/disorders.

**Course Learning Outcomes**

The student will be able to

1. Understand the importance of nutritional assessment in the care of patients.
2. Gain knowledge about causative factors and metabolic changes in various diseases/disorders and the associated principles of diet therapy.
3. Learn the principles of dietary counseling.
4. Comprehend the rationale of prevention of various diseases/disorders.

**CONTENTS**

**PERIODS**

**UNIT I Nutritional Assessment and Care of Patients**

**9**

- Nutrition care process
  - Nutritional screening and assessment of patients – out patient & hospitalized
  - Tools for screening
  - Nutritional interpretation of routine medical and laboratory data
  - Nutrition care plan and implementation
  - Monitoring and follow up
  - Ethical issues
- Dietary Counseling
- Nutrition Support: Enteral Nutrition

**UNIT II Medical Nutrition Therapy in metabolic diseases**

**10**

- Diabetes Mellitus – Type 1, Type 2 and Gestational diabetes
- Endocrine disorders – Polycystic ovary disease, thyroid

**Unit III Coronary Heart Diseases**

**5**

- Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications, treatment, MNT, dietary counselling and recent advances in
  - Hypertension, dyslipidemia, Congestive heart failure

**Unit IV Gastrointestinal tract Disorders**

**8**

- Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications, treatment, MNT, dietary counselling and recent advances in
  - GERD, peptic ulcer, dyspepsia, flatulence, inflammatory bowel disease, diverticular disease, hernia, hemorrhoids, intestinal surgery, bariatric surgery.
  - Nutrition for oral and dental disorders

**Unit V Overview of some degenerative disorders**

**8**

- Cancer – General and specific cancers, effect of cancer therapy on MNT,
- Role of diet in etiology and management
- Chronic Obstructive Pulmonary Disease
- Systemic Lupus Erythematosus
- Nutrition for bone health

**Unit VI Pediatric Nutrition**

**6**

- Inborn errors of metabolism – Phenylketonuria, Galactosemia, Maple Syrup Urine Disease, Glycogen Storage Disease
- Severe Acute Malnutrition
- Cystic fibrosis

**Suggested readings:**

- Gibney MJ, Elia M, Ljungqvist & Dowsett J. (2005) *Clinical Nutrition. The Nutrition Society Textbook Series*. Blackwell Publishing Company
- Gibson SR. (2005). *Principles of Nutritional Assessment*. 2nd Edition. Oxford University press
- Joshi YK. *Basics of Clinical Nutrition*. 2nd Edition. Jaypee Brothers Medical Publishers.
- Lee RD & Neiman DC. (2009). *Nutritional Assessment*. 5th Edition. Brown & Benchmark.
- Mahan, L. K. and Escott Stump. S. (2016) *Krause's Food & Nutrition Therapy* 14th ed. Saunders-Elsevier
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) *Modern Nutrition in Health and Disease*. 10th ed. Lipincott, William and Wilkins.
- Williams, S.R. (2001) *Basic Nutrition and Diet Therapy*. 11th ed. Times Mirror Mosby College Publishing
- World Cancer Research Fund & American Institute for Cancer Research (2007) *Food, Nutrition, Physical Activity and the Prevention of Cancer- A Global Perspective*. Washington E.D. WCRF.

**Teaching Plan:**

**Week 1:** Nutrition care process and steps of NCP

**Week 2:** Ethical issues, Dietary Counselling

**Week 3:** Enteral Nutrition, Medical Nutrition Therapy in Diabetes Mellitus – Type 1, Type 2

**Week 4:** Medical Nutrition Therapy in Gestational diabetes Endocrine disorders – Polycystic ovary disease, thyroid

**Week 5:** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Hypertension, dyslipidemia

**Week 6:** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Congestive heart failure

**Week 7:** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in GERD, peptic ulcer, dyspepsia, flatulence

**Week 8 :** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Inflammatory bowel disease, diverticular disease, hernia, hemorrhoids

**Week 9:** Complications and MNT and dietary counseling in Intestinal surgery, bariatric surgery Nutrition for oral and dental disorder, Cancer – General and specific cancers, effect of cancer therapy on MNT, Role of diet in etiology and management

**Week 11:** Chronic Obstructive Pulmonary Disease, Systemic Lupus Erythematosus, Nutrition for bone health

**Week 12 :** Inborn errors of metabolism – Phenylketonuria, Galactosemia, Maple Syrup Urine Disease, Glycogen Storage Disease, Severe Acute Malnutrition, Cystic fibrosis

**Facilitating the achievement of Course Learning Outcomes**

	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the importance of nutritional assessment in the care of patients.	Discussion	Assignment on nutritional assessment and care of patients.
2.	Gain knowledge about causative factors and metabolic changes in various diseases/disorders and the associated principles of diet therapy.	Discussion	Assignment on etiology, pathophysiology and metabolic changes in various disorders Diet plan for management of diseases.
3	Learn principles of dietary counselling	Discussion	Practice interactive session on dietary counselling
4.	Comprehend the rationale of prevention of various diseases/disorders	Discussion	Assignment on role of diet in prevention and management of these disorders

**INTEGRATED PRACTICAL**

Maximum Marks: 100

Duration: 3 Hrs

### PART-A ADVANCED HUMAN NUTRITION

#### Course Objectives:

To learn techniques in nutrient analysis of foods and assessment of micronutrient status.

#### Course Learning Outcomes:

1. Understand how requirements are derived using sensitive methods like nutrient balance studies and load tests
2. Analyze nutrients in foods and biological fluids like urine
3. Recognize clinical symptoms of deficiency and excess
4. Appreciate research done in the field of nutrition

#### CONTENTS

#### PRACTICALS

##### UNIT I: Human Balance Studies

4

- Nitrogen balance.
- Mineral balance: Ca/Fe/Zn.

##### UNIT II: Estimation of Micronutrient Status

5

- Iodine in salt and urine
- Carotenoids/phytochemicals in fruits/vegetables
- Estimation of iron content of a food
- Load test of Vitamin C
- Clinical assessment of micronutrient status

##### UNIT III: Exposure to research in Human Nutrition

3

- Field visits to institutions conducting research in human nutrition and report
- Writing of the visits
- Critical review of original research articles

#### Suggested Readings:

- Ranganna S. (1986). Handbook of Analysis and Quality Control of Fruit and Vegetable Products. New Delhi: Tata McGraw-Hill Education.
- Raghuramulu N., Madhavan Nair K., Kalyanasundaram S.(2003). *A Manual of Laboratory Techniques*. Hyderabad: National Institute of Nutrition

### PART –B CLINICAL NUTRITION

#### Course objectives:

To enable students to plan and prepare suitable therapeutic diets based on patient needs, provide dietary counselling for prevention/ treatment of various diseases/ disorders and familiarize with special therapeutic/ health foods

#### CONTENTS

#### PERIODS

<b>Unit I</b> Assessment of patient needs – nutritional assessment and screening	1
<b>Unit II</b> Planning and preparation of diets for following diseases	10

- Type 1 diabetes
- Type 2 diabetes
- Gestational Diabetes
- PCOD
- Peptic ulcer
- Hypertension and dyslipidemia
- Congestive heart failure
- Ulcerative colitis
- Diverticular disease
- Cancer
- IEM and SAM
- Unit III Market survey of the following products
- Food supplements
- Enteral formulas
- Functional foods
- Disease specific foods

1

**Suggested Readings:**

- Gibney MJ, Elia M, Ljungqvist & Dowsett J. (2005) Clinical Nutrition. The Nutrition Society Textbook Series. Blackwell Publishing Company
- Gibson SR. (2005). Principles of Nutritional Assessment. 2nd Edition. Oxford University press
- Joshi YK. Basics of Clinical Nutrition. 2nd Edition. Jaypee Brothers Medical Publishers.
- Lee RD & Neiman DC. (2009). Nutritional Assessment. 5th edition. Brown & Benchmark.
- Mahan, L. K. and Escott Stump. S. (2016) Krause's Food & Nutrition Therapy 14th ed. Saunders-Elsevier
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) Modern Nutrition in Health and Disease. 10th ed. Lipincott, William and Wilkins.
- Williams, S.R. (2001) Basic Nutrition and Diet Therapy. 11th ed. Times Mirror Mosby College Publishing
- World Cancer Research Fund & American Institute for Cancer Research (2007) Food, Nutrition, Physical Activity and the Prevention of Cancer- A Global Perspective. Washington E.D. WCRF.

**INTERNSHIP**

**Marks: 50**

**Duration: 3 Hrs**

**Course Objectives:**

To gain hands on experience of working in various institutions related to the area of Food and Nutrition.

The students could work with NGOs / Government agencies / International agencies/ Hospitals / Food Industries etc. They would be required to present a report of their Internship in their Department.

**TECHNICAL WRITING AND SEMINAR**

**Marks: 50**

**Duration: 3 Hrs**

**Course Objectives:**

To understand the nuances of scientific writing, develop skills in collation and presentation of scientific information and learn the process of developing a research proposal/ project proposal

**Course Learning Outcomes:**

Student will be able to

1. Demonstrate knowledge of scientific writing method and styles
2. Develop a research design on a topic relevant to their field
3. Prepare a systematic literature review on a select topic
4. Present a seminar of the literature review

**Contents**

**Periods**

The practical will have three components. Based on option of students for either dissertation or project work, due emphasis will be provided

**A) Research design / Project proposal 12**

- Under the guidance of supervisor allocated prepare a research design / project proposal

**B) Skills in Technical Writing 24**

- Learn the nuances of select technical writing styles/ guides
- Analyze technical posters of researches in the fields
- Analyze dissertations, research reports and project evaluation reports and their presentations

**C) Review of Literature & Seminar 12**

- Prepare a literature review on a select topic using an approved style guide
- Conduct Plagiarism check of document prepared
- Present an oral seminar on the topic

**Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	<b>Week 1 2 &amp; 3</b> Demonstrate knowledge of scientific writing method and styles	Students oriented the nuances of select technical writing styles/ guides Analyze technical posters of researches in the fields Analyze dissertations, research reports and project evaluation reports Videos on scientific	Quiz and exercises will be given to students

		writing shown	
2	<b>Week 3 4 5 6 7 &amp; 8</b> Develop a research design on a topic relevant to their field	Along with allocated supervisors students will work on deciding a topic of research, review literature and develop an appropriate research design	Students submit the research design to technical review board for review and comments
3.	<b>Week 9&amp; 10</b> Prepare a systematic literature review on a select topic	Students collate the literature review done about their research topic selected and prepare a document based on it.  Students review old seminar documents and critique their presentation	Students literature review document reviewed by seminar committee  Plagiarism test done of final document
3.	<b>Week 11&amp; 12</b> Present a Seminar based on the literature review done	Students watch videos of seminar presentations and critique them.  Prepare a seminar presentation of	Students presentations evaluated by the departmental seminar committee

**Suggested Readings:**

- Alley, M. (2018) The Craft of Scientific Writing. New York: Springer.
- Bernard, H.R. (2000). Social Research Methods: Qualitative and Quantitative Approaches. Thousand Oaks, CA: Sage
- Black, J.A. and Champion, D.J. (1976). Methods and Issues in Social Research. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). How to Research. New Delhi: Viva books.

- Blum, D., Knudson M., and Henig, R. M. (2005) Field Guide for Science Writers: The Official Guide of the National Association of Science Writers. USA; Oxford University Press. <http://www.nasw.org/field-guide>
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). Research Methods in Psychology (Third Edition). New York: West Publishing Company.
- Katz, M. (2009) From Research to Manuscript: A Guide to Scientific Writing (2nd Ed). New York : Springer
- <http://www.apastyle.org/>
- <http://www.citethisforme.com/guides>

**ELECTIVE PAPERS  
GROUP –A  
PERSPECTIVES IN PUBLIC HEALTH NUTRITION  
THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Course Objectives:**

This Course will familiarize the students with the concepts of Public Health Nutrition, health care of the community, and food and nutrition security. The students will acquire knowledge about the causes, consequences and preventive strategies for nutritional problems in the community and also strategies for improving the nutritional and health status of communities.

**Course Learning Outcomes:**

Student will be able to

1. Become familiar with the concept of public health nutrition and health care of the community.
2. Understand the causes, consequences and preventive strategies for nutritional problems in the community.
3. Comprehend the strategies for improving nutrition and health status of communities.
4. Acquire knowledge about the concept of food and nutrition security and the various programmes for improving food and nutrition security.

**CONTENTS**

**PERIODS**

**UNIT I: Public Health Nutrition and Health Care Systems**

**8**

- Aim, scope and content of Public Health Nutrition
- Role of Public Health Nutritionist in national development
- Health – definition, dimensions, determinants and indicators
- Health care of the community
- Health care systems

**UNIT II: Public Health Aspects of Malnutrition**

**18**

- Etiology, public health implications, preventive strategies for CED/PEM, Severe Acute Malnutrition and micronutrient deficiencies of public health significance
- Public health implications and preventive strategies for Obesity, Hypertension, Coronary Heart Disease, Diabetes, Osteoporosis, Dental Caries.

**Unit III: Approaches/ Strategies for Improving Nutrition and Health Status of the Community**

**12**

- Health based interventions including immunization, provision of safe drinking water/ sanitation, prevention and management of diarrhoeal diseases

- Food based interventions including food fortification, dietary diversification, supplementary feeding and biotechnological approaches
- Education based interventions including growth monitoring and promotion (GMP), health / nutrition related behaviour change communication

**UNIT IV: Food and Nutrition Security**

**10**

- Concepts and definitions of food and nutrition security at national, household and individual levels.
- Public Sector programmes for improving of food and nutrition security and National Nutrition Mission

**Suggested Readings:**

- Gibney M J, Margetts B M, Kearney J M Arab (1st Eds) (2004) Public Health Nutrition, NS Blackwell Publishing
- Gopalan C (Ed) (1987) Combating Under nutrition- Basic Issues and Practical Approaches, Nutrition Foundation of India
- Kaufman M (2007) Nutrition in promoting the public health strategies, principles and practices. Jones and Barlett Publishers
- Park K (24th ed) (2017) Park's Textbook of Preventive and Social Medicine, Jabalpur M/s. Banarsidas Bhanot
- Dietary Guidelines for Indians (2nd ed) (2011) Dietary Guidelines for Indians: A manual., NIN
- IFCT (2017) Indian food composition table, NIN
- Ross A C (Eds) (2012) Nutrition in health and disease, Lippincott Williams & Wilkins
- Shils M E (Eds) (1998) Nutrition in health and disease, Lippincott Williams & Wilkins
- NNM: <http://www.icds-wcd.nic.in/nnm/home.html>
- Vir S (2011) Public health nutrition in developing countries, Woodhead Publishing India limited

**Teaching Plan:**

**Week 1:** Concept of public health nutrition, Aim, scope and content of Public Health Nutrition, Role of Public Health Nutritionist in National development, Health - definition, dimensions

**Week 2:** Health - determinants and indicators, Health care of the community, Health care systems

**Week 3:** Etiology, public health implications, preventive strategies for CED/PEM, Severe Acute Malnutrition

**Week 4:** Etiology, public health implications, preventive strategies for micronutrient deficiencies of public health significance

**Week 5:** Etiology, public health implications, preventive strategies for micronutrient deficiencies of public health significance

**Week 6:** Etiology, public health implications, preventive strategies for micronutrient deficiencies of public health significance, Public health implications and preventive strategies for Obesity, Hypertension, Coronary Heart Disease

**Week 7:** Public health implications and preventive strategies for Diabetes, Osteoporosis, Dental Caries. Health based interventions including immunization, provision of safe drinking water/ sanitation, prevention and management of diarrhoeal diseases

**Week 8:** Food based interventions including food fortification, dietary diversification, supplementary feeding and biotechnological approaches

**Week 9:** Education based interventions including growth monitoring and promotion (GMP), health / nutrition related behaviour change communication

**Week 10:** Education based interventions - nutrition related behaviour change communication, Concepts and definitions of food and nutrition security at national, household and individual levels

**Week 11:** Public Sector programmes for improving of food and nutrition security

**Week 12:** Public Sector programmes for improving of food and nutrition security, National Nutrition Mission

### Facilitating the Achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching And Learning Activity	Assessment Tasks
I	Become familiar with the concept of public health nutrition and health care of the community.	Lecture-cum-Discussion	Assignment/ Test/ Quiz
II	Understand the causes, consequences and preventive strategies for nutritional problems in the community.	Lecture-cum-Discussion, Presentations	Student presentations/ Assignment/ Test
III	Comprehend the strategies for improving the nutrition and health status of communities.	Lecture-cum-Discussion, Presentations	Student presentations/ Assignment/ Test
IV	Acquire knowledge about the concept of food and nutrition security and the various programmes for improving food and nutrition security	Lecture-cum-Discussion, presentations	Student presentations/ Assignment/ Test

### PRACTICAL

**Maximum Marks: 50**

**Duration: 3 Hrs**

#### Course Objectives:

To develop nutrition education program for vulnerable groups and planning nutritious dishes for micronutrient deficiencies and field visit of going government program.

#### CONTENTS

#### PERIODS

- Development of a plan for conducting nutrition education programmes in the community. Preparation of communication aids for different groups 4
- Development of low cost recipes for infants, preschoolers, adolescents, pregnant and lactating mothers 3
- Planning and preparation of diet/ dishes for Protein Energy Malnutrition (PEM), Vitamin A Deficiency (VAD), Iron Deficiency Anaemia (IDA), obesity, hypertension, diabetes 3

- Field visits to ongoing national nutrition programmes 2

**Suggested Readings:**

- Chadha R , Mathur P (2015) *Nutrition A life cycle Approach*, Orient Black Swan Pvt. Ltd, Lady Irwin College
- Dietary Guidelines for Indians (2nd ed) (2011) *Dietary Guidelines for Indians: A manual.*, NIN
- IFCT (2017) *Indian Food Composition Tables*, NIN
- Raina U, Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (4th ed) (2010) *Basic food preparation*, Lady Irwin College
- Khanna, K, Gupta, S, Sethi, R, Mahna, R, Rekhi, T, 2004. *The Art and science of cooking-A Practical Manual*. Elite Publishing House Pvt. Ltd.

**INSTITUTIONAL FOOD MANAGEMENT  
THEORY**

**Marks : 100**

**Duration: 3 Hrs**

**Course Objectives**

To develop a knowledge base about the facilities required for different types of food service units and to equip individuals in understanding and managing resources in a food service institution

**Course Learning Outcomes:**

Student will be able to:

1. Gain expertise to function as a food service manager.
2. Develop knowledge in managing various food service systems.
3. Understand and manage resources in a food service institution.
4. Provide practical experience in managing food material for food service management

**UNIT I. Managing catering processes**

**9**

- Approaches to management
- Classical, Scientific, Systems approach, Management by Objective, Just-in Time, Total Quality Management, Quality of Work Life
- Tools of Management
- Tangible Tools: Organization chart, Job description, Job specification, Job analysis: Path way chart, Process chart, Work schedule, Production schedule, Staff and service analysis, Budget
- Intangible tools: Communication, Leadership, Decision making

**UNIT II. Food production cycle in various food service institutions**

**7**

- Meal Ordering System (manual, electronic)
- Menu construction ( hospital, canteen, MDM, food stall)
- Menu card/ display
- Food production processes for various situations
- Guidelines of regulatory bodies

**UNIT III. Managing Resources**

**10**

- Manpower
- Functions of a personnel manager, absenteeism, labour turnover
- Recruitment and selection process - Process and Sources-Internal and External, Process interview, Tests
- Orientation and Training- Importance of orientation and training, content of programme, Steps of developing an Orientation programme, Types of training - OJT, Group; continuous training, training for development, Developing a training programme
- Appraisal of employees – Importance, Methods, Limitation
- Motivating employees- Motivation theories and approaches -Content theories: Maslow, Herzberg, McClelland; Process theories: Vroom, Equity; Reinforcement theory; Techniques of motivating employees
- Employee behavior and policies
- Finance and Marketing 8
- Managing finances in a catering establishment
- Records: Menu, Purchase, Store, Production, Sales, Personnel, Utilities
- Reports :Cost analysis: Concept of Trial Balance, Profit and Loss Account
- Marketing techniques and strategies
- Equipment and Layouts 6
- Types of equipment
- Steps in layout planning and architectural features
- Feasibility assessment in terms of layout planning

**UNIT IV. Food safety, hygiene and regulations in food service institutions**

**8**

- HACCP
- Good Manufacturing Practices (GMP), Good Hygiene Practices (GHP)
- FSSA 2006
- Food safety in different food service units
- Accreditations for healthcare systems: NABH, JCI

**Suggested Readings:**

- West B Bessie & Wood Levelle (1988) Food Service in Institutions 6th Edition Revised By Hargar FV, Shuggart SG, & Palgne Palacio June, Macmillian Publishing Company New York.
- Sethi Mohini (2005) Institution Food Management. New Age International Publishers
- Kazarian E A ( 1977) Food Service facilities Planning 3rd Edition Von Nostrand Reinhold New York.
- Kotas Richard & Jayawardardene. C (1994) Profitable Food and Beverage Management Hodder & Stoughton Publications
- Kotler Philip. (2001) Marketing management Millennium Edition Prentice Hall of India
- Taneja S and Gupta SL ( 2001) Entrepreneurship development, Galgotia Publishing
- Dessler Gary ( 2007) Human Resource Management 11th edition Prentice Hall New Jersey
- Luthans Fred (2004) Organisational Behaviour 10th Edition Mc Graw Hill International

**Teaching Plan**

**Week 1:** Classical, Scientific, Systems approach, Management by Objectives, Just-in Time, Total Quality Management, Quality of Work Life, Tools of management (Introduction)

**Week 2:** Tools of management: Tangible Tools: Organization chart, Job description, Job specification, Job analysis: Path way chart, Process chart, Work schedule, Production schedule, Staff and service analysis, Budget

**Week 3:** Intangible tools: communication, leadership, decision making, food production cycle in various institutions: meal ordering system (manual, electronic)

**Week4:** Food production cycle in various institutions: Meal ordering system, menu construction ( hospital, canteen, MDM, food stall), menu card/ display, food production processes for various situations

**Week 5:** Food production cycle in various institutions: Guidelines of regulatory bodies, Managing Resources: Functions of a personnel manager, absenteeism, labour turnover Recruitment and selection process - Process and Sources-Internal and External, Process interview, Tests

**Week 6:** Manpower: Orientation and Training- Importance of orientation and training, content of programme, Steps of developing an Orientation programme, Types of training - OJT, Group; continuous training, training for development, Developing a training programme ; Appraisal of employees – Importance, Methods, Limitation

**Week 7:** Manpower: Motivating employees- Motivation theories and approaches - Content theories: Maslow, Herzberg, McClelland; Process theories: Vroom, Equity; Reinforcement theory; Techniques of motivating employees ; Employee behavior and policies

**Week 8:** Finance and Marketing: Managing finances in a catering establishment Records: Menu, Purchase, Store, Production, Sales, Personnel, Utilities

**Week 9:** Finance and Marketing: Reports :Cost analysis: Concept of Trial Balance, Profit and Loss Account, Marketing techniques and strategies

**Week 10:** Equipment and Layouts: Types of equipment, Steps in layout planning and architectural features

**Week 11:** Equipment and Layouts: Feasibility assessment in terms of layout planning Food safety, hygiene and regulations in food service institutions: HACCP, Good Manufacturing Practices (GMP), Good Hygiene Practices (GHP), FSSA 2006

**Week 12:** Food safety, hygiene and regulations in food service institutions: Food safety in different food service units. Accreditations for healthcare systems: NABH, JCI

### **Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Develop insight about basic concept of catering management	Discussion	Assignment on various theories of management
2.	Understand manage food service in healthcare	Discussion, visits to healthcare system	Report of the visits
3.	Understand resource management in a food service unit	Discussion	Assignment on collecting information on various resources in management
4.	Develop insight of new laws and regulation in food safety for food service	Discussions	Assignment

	units		
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## PRACTICAL

Marks : 50

Duration: 3 Hrs

### Course Objectives

To develop skills in menu planning, quantity food production for various food service organizations within specific budgets

### Course Learning Outcomes

Student will be able to

1. Understand the operations of food service units.
2. Develop insight about products and their price in market.
3. Develop skills in planning menus for various food service organizations within specific budgets.
4. Application of acquired skills in menu planning and quantity food production

### Contents

### Periods

- Market survey of various food products raw and processed in different kind of markets 1
- Planning menus for the following: 2
  - Conference
  - Food stall
- Planning menu and adjusting nutrients and cost for the following: 3
  - Food items for MDM
  - cyclic menu for hospital (government/private)
- Standardizing recipes in quantity cooking 2
- Canteen project/ Event catering
- Developing/training 4
- Development of sale promotion tool
- Training Food service unit personnel in hygiene and sanitation

### Suggested Readings:

- West B Bessie & Wood Levelle (1988) *Food Service in Institutions* 6th Edition Revised By Hargar FV, Shuggart SG, & Palgne Palacio June, Macmillian Publishing Company New York.
- Sethi Mohini (2005) *Institution Food Management*. New Age International Publishers
- Kazarian E A ( 1977) *Food Service facilities Planning*. 3rd Edition Von Nostrand Reinhold New York.
- Kotas Richard & Jayawardardene. C (1994) *Profitable Food and Beverage Management*. Hodder & Stoughton Publications
- Taneja S and Gupta SL (2001) *Entrepreneurship Development*, Galgotia Publishing

## PUBLIC HEALTH NUTRITION THEORY

**Marks: 100**

**Duration: 3 hrs**

**Course objectives:**

The course will familiarize the students with understanding of the concept of public health nutrition and the national health care delivery system, the current concerns in public health nutrition and the strategies for improving the nutritional status of the communities. The course will also orient students towards concept of food and nutrition security and critical appraisal of the current scenario.

**Course Learning Outcomes:**

Students will be able to:

1. Understand the concept and current concerns of Public Health Nutrition.
2. Comprehend the National Health Care Delivery System.
3. Get exposed to population dynamics and economics of malnutrition and how it impacts national development
4. Understand the causes and consequences of nutritional problems in the community.
5. Be familiar with the concept of food and nutrition security.

**CONTENTS**

**PERIODS**

**UNIT I: Public Health Nutrition and Health Care System**

**14**

- Aim, scope and content of public health nutrition
- Current concerns in public health nutrition: An overview
- Role of public health nutritionists in national development
  - Health - definition, dimensions, determinants, indicators
  - Community health care
- National Health Care Delivery System

**UNIT II: Population Dynamics**

**6**

- Demographic transition
- Population structure: Implications on quality of life
- Population Policy

**Unit III: Economics of Malnutrition**

**4**

- Health Economics and Economics of Malnutrition
- Impact of malnutrition on productivity and national development

**Unit IV: Approaches for improving nutrition and health status of the community**

**16**

- Health based interventions including immunization, provision of safe drinking water/ sanitation, prevention and management of diarrhoeal diseases
- Food based interventions including food fortification, dietary diversification, supplementary feeding and biotechnological approaches.
- Education based interventions including growth monitoring and promotion (GMP), health / nutrition related social and behaviour change communication.

**Unit V: Food and Nutrition Security**

**8**

- Concepts and definitions of food and nutrition security at national, regional, household and individual levels
- Impact of food production losses, distribution, access, availability, consumption on food and nutrition security- critical appraisal of the current scenario

**Suggested Readings:**

- Achaya, K.T. (Ed) (1984) Interface Between Agriculture, Nutrition and Food Science, The United National University.
- Beaton, G. H and Bengoa, J. M. (Eds) (1996) Nutrition in Preventive Medicine, WHO.
- Gibney M.J., Margetts, B.M., Kearney, J. M. Arab, I. (Eds) (2004) Public Health Nutrition, NS Blackwell Publishing.
- Gopalan, C. (Ed) (1987) Combating Under nutrition – Basic Issues and Practical Approaches, Nutrition Foundation of India.
- Kaufman, M. (2007) Nutrition in promoting the public health strategies, principles and practice, Jones and Bartlett Publishers.
- Park, K. (2017) Park's Textbook of Preventive and Social Medicine, 24th ed. Jabalpur M/s. Banarsidas Bhanot.
- Vir, S. (2011), Public health nutrition in developing countries Part-1 & 2. Woodhead Publishing India limited.
- WHO (2006). WHO Child growth standards: Length/height for age, weight for age, weight for length, weight for height and body mass index (2006). Available at <http://www.who.int>.
- WHO (2009). WHO Child growth standards: Growth velocity based on weight, length and head circumference Available at <http://www.who.int>
- WHO (2007). WHO Reference Data for Children and Adolescents (5-19 years). WHO

**Teaching Plan:**

**Week 1:** Aim, scope and content of public health nutrition, • Current concerns in public health nutrition: An overview

**Week 2:** Role of public health nutritionists in national development  
Health - definition, dimensions, determinants, indicator

**Week 3:** Community health care: Concept, levels of health care: primary, secondary, tertiary level care, Primary health care,

**Week 4:** National Health Care Delivery System  
Demographic transition

**Week 5:** Population structure: Implications on quality of life  
Population Policy

**Week 6:** Health Economics and Economics of Malnutrition  
Impact of malnutrition on productivity and national development

**Week 7:** Health based interventions including immunization, provision of safe drinking water/sanitation, prevention and management of diarrhoeal diseases

**Week 8:** Food based interventions including fortification, use of biotechnology, supplementary feeding

**Week 9:** Education based interventions including growth monitoring and promotion, communication for health and nutrition behaviour change

**Week 10:** Education based interventions including growth monitoring and promotion, communication for health and nutrition behaviour change

**Week 11:** Concepts and definitions of food and nutrition security at national, regional, household and individual levels

**Week 12:** Impact of food production losses, distribution, access, availability, consumption on food and nutrition security- critical appraisal of the current scenario

**Facilitating the achievement of Course Learning Outcomes**

UNIT NO.	COURSE LEARNING OUTCOMES	TEACHING AND LEARNING ACTIVITY	ASSESSMENT TASKS
I	Understand the concept and current concerns of Public Health Nutrition.	Presentations, Discussion	Test on the topic
II	Comprehend the National Health Care Delivery System.	Presentations, Discussion	Individual Assignments
III	Get exposed to population dynamics and economics of malnutrition and how it impacts national development	Presentations, Discussion,	Group presentation
IV	Understand the causes and consequences of nutritional problems in the community.	Presentations, Discussion,	Individual Assignments for different nutritional problems
V	Be familiar with the concept of food and nutrition security.	Presentations, Discussion	Test on knowledge domain, Individual Assignment

### PRACTICAL

**Marks: 50**

**Duration: 3 hours**

#### COURSE OBJECTIVES:

The aim of the course is to plan and prepare low cost nutritious dishes and cyclic menus for vulnerable groups, understand the national health care delivery system and identify type of nutritional problems and their determinants in different population groups.

#### Contents

#### Periods

**Unit I:** Development of low cost recipes for infants, preschoolers, elementary school children, adolescents, pregnant and lactating mothers. Standardization and demonstration of any one recipe.

4

**UNIT II:** Planning and preparation of cyclic menu for a school feeding programme

3

**Unit III:** Field visit to Primary Health Centre

1

**Unit IV:** Identification of the type of nutritional problems and their determinants in different population groups based on National/regional level Nutrition and Health Surveys- Secondary data analysis

4

#### Suggested Readings:

- Raina U, Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (4<sup>th</sup> ed) (2010) *Basic food preparation*, Lady Irwin College.
- Dietary Guidelines for Indians (2011). *Dietary Guidelines for Indians: A manual*. Second edition, NIN
- IFCT (2017). *Indian Food Composition Tables*, NIN.
- Khanna, K, Gupta, S, Sethi, R, Mahna, R, Rekhi, T, 2004. *The Art and science of cooking-A Practical Manual*. Elite Publishing House Pvt. Ltd.

## PROGRAMME PLANNING IN PUBLIC HEALTH NUTRITION THEORY

**Marks: 100**

**Duration: 3 hours**

### Course Objectives:

This course will make the students familiar with the process of planning and management of public health nutrition programmes. It will help them understand the concept of monitoring of programmes and nutritional surveillance. The students will also learn about nutrition in emergency and disaster situations.

### Course Learning Outcomes:

The students will:

1. Become familiar with the process of planning and management of public health nutrition programmes.
2. Develop an understanding of the concept of nutrition monitoring and nutrition surveillance.
3. Get acquainted with the nutritional problems during emergencies/ disasters and the strategies to tackle them.

### CONTENTS

### PERIODS

<b>Unit 1: Programme planning and management in public health nutrition</b>	<b>14</b>
<ul style="list-style-type: none"><li>• Introduction to Management Principles</li><li>• Basic principles and models of programme planning</li><li>• Planning process in public health nutrition - community needs assessment, setting goals and objectives, selecting indicators, selecting interventions, planning for programme implementation and resources, planning for programme monitoring and evaluation, planning for programme termination, stakeholder participation in programme management</li><li>• Planning at micro and macro level</li></ul>	
<b>Unit 2: Programme monitoring and evaluation</b>	<b>12</b>
<ul style="list-style-type: none"><li>• Definition, significance and purpose of monitoring food/nutrition programmes</li><li>• Identification and selection of indicators for monitoring, data collection and analysis system (e.g. MIS)</li><li>• Definition, significance and purpose of evaluation of food/nutrition programmes</li><li>• Principles of evaluation, types, models and steps of evaluation</li><li>• Identification and selection of indicators for evaluation</li><li>• Strategies for data collection - qualitative and quantitative</li></ul>	
<b>Unit 3: Nutrition Surveillance</b>	<b>10</b>

- Objectives, initial assessment indicators for use in nutrition surveillance
- Nutritional surveillance for programme planning: Triple A approach
- Current programme monitoring systems in India

#### Unit 4: Nutrition in emergencies and disasters

12

- Natural and manmade disasters resulting in emergency situations
- Nutritional problems in emergencies in vulnerable groups
- Macro / micronutrient deficiencies
- Infections
- Assessment and surveillance of affected population groups – clinical, anthropometric and dietary
- Nutritional relief and rehabilitation – assessment of food needs, food distribution strategies, mass/supplementary feeding, hygiene and sanitation, evaluation of feeding programmes
- Public nutrition approaches to tackle nutritional problems in emergencies

#### Suggested Readings:

- Boyle M.A. (2016). *Community Nutrition in Action: An Entrepreneurial Approach*. 7th Edition. Brooks Cole.
- Edelstein S. (2010) *Nutrition in Public Health: A handbook for developing programmes and services*. Third Edition. Jones and Bartlett Learning.
- FAO. (1983) *Selecting Interventions for Nutrition Improvement. A Manual*. Nutrition in Agriculture.No. 3.
- Gibney M.J., Margetts, B.M., Kearney, J.M., Arab, L. (Eds) (2004) *Public Health Nutrition*.NS Blackwell Publishing.
- Vir, S.C. (Ed.). (2011). *Public Health Nutrition in Developing Countries*. Part 2. Woodhead Publishing India.
- WHO. (2000). *The management of nutrition in major emergencies*.

#### Teaching Plan

**Week 1:** Concept of management, its importance. Introduction to Management Principles

**Week 2:** Basic principles and models of programme planning. Planning process in public health nutrition, community needs assessment, setting goals and objectives, selecting indicators

**Week 3:** Planning process in public health nutrition, selecting interventions, planning for programme implementation and resources, planning for programme monitoring and evaluation,

**Week 4:** Planning process in public health nutrition

- planning for programme termination
- stakeholder participation in programme management

Definition, significance and purpose of monitoring food/nutrition programmes

Identification and selection of indicators for monitoring, data collection and analysis system

**Week 5:** Definition, significance and purpose of evaluation of food/nutrition programmes

Principles of evaluation, types, models and steps of evaluation

**Week 6:** Identification and selection of indicators for evaluation

Strategies for data collection - qualitative and quantitative

**Week 7:** Strategies for data collection – quantitative Objectives, initial assessment indicators for use in nutrition surveillance

**Week 8:** Nutritional surveillance for programme planning: Triple A approach

**Week 9:** Current programme monitoring systems in India

**Week 10:** Natural and manmade disasters resulting in emergency situations  
 Nutritional problems in emergencies in vulnerable groups Macro / micronutrient deficiencies  
 Infections

**Week 11:** Assessment and surveillance of affected population groups – clinical, anthropometric and dietary  
 Nutritional relief and rehabilitation – assessment of food needs, food distribution strategies, mass/supplementary feeding, hygiene and sanitation, evaluation of feeding programmes

**Week 12:** Nutritional relief and rehabilitation – assessment of food needs, food distribution strategies, mass/supplementary feeding, hygiene and sanitation, evaluation of feeding programmes, Public nutrition approaches to tackle nutritional problems in emergencies

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
I.	Become familiar with the process of planning and management of public health nutrition programmes.	Lecture-cum-Discussion	Assignment/ Test
II & III	Develop an understanding of the concept of nutrition monitoring and nutrition surveillance.	Lecture-cum-Discussion	Assignment/ Test
IV	Get acquainted with the nutritional problems during emergencies/ disasters and the strategies to tackle them.	Lecture-cum-Discussion	Assignment/ Test/ Student Presentations

**PRACTICAL**

**Maximum Marks: 50**

**Duration: 3 Hrs**

**Course Learning Outcomes:**

The students will:

- Comprehend methods to assess the health and nutrition needs of the community.
- Acquire skills to design an action plan for addressing a public health nutrition problem in the community.

**CONTENTS**

**PRACTICALS**

1. Assessment of needs of the public health nutrition problems in an identified community. **6**
2. Designing a suitable action plan for a public health nutrition programme for the identified community. **6**

**Suggested Readings:**

- Boyle M.A. (2016). *Community Nutrition in Action: An Entrepreneurial Approach*. 7<sup>th</sup> Edition. Brooks Cole.
- Edelstein S. (2010) *Nutrition in Public Health: A handbook for developing programmes and services*. Third Edition. Jones and Bartlett Learning.
- FAO. (1983) *Selecting Interventions for Nutrition Improvement. A Manual*. Nutrition in Agriculture.No. 3.
- Gibney M.J., Margetts, B.M., Kearney, J.M., Arab, L. (Eds) (2004) *Public Health Nutrition*. NS Blackwell Publishing.
- Vir, S.C. (Ed.). (2011). *Public Health Nutrition in Developing Countries*. Part 2. Woodhead Publishing India.

**PRINCIPLES OF FOOD PROCESSING  
THEORY**

**Maximum Marks: 100**

**Duration: 3 hours**

**Course Objective:**

To acquaint with properties of foods and basic principle of Food Engineering and its Processes, along with the unit operations.

**Course outcome:**

Student will be able to

1. Understand the basic concepts of properties of foods and basic food engineering concepts
2. Acquire the knowledge of various unit operations in food processing.
3. Gain the knowledge of food packaging and its interaction with food products.

**Unit- 1 Properties of Foods and Processing 20**

- Properties of liquid, solid and gases, material transfer, fluid flow, heat transfer, effect of processing on sensory characteristics of foods.

**Unit-2 Unit operations in food processing 20**

- Cleaning, sorting, grading, peeling, Size reduction, mixing and forming, Separation techniques, Process Plant design

**Unit 3 Food Packaging 8**

- Introduction, Types, printing, interaction between packaging and foods, environmental consideration.

**Suggested Readings:**

- Fellows P J (2002), *Food Processing Technology- Principles and Practices*, 2nd Edition. Woodhead Publishing Ltd
- Earle RL. 1985. *Unit Operations in Food Processing*. Pergamon Press.
- Fellows P. 1988. *Food Processing Technology*. VCH Ellis Horwood.
- Heldman DR & Singh RP.1995. *Food Process Engineering*. AVI Publ.
- McCabe WL & and Smith JC. 1971. *Fundamental of Food Engineering*. AVI Publ.
- Sahay KM & Singh KK. 1994. *Unit Operation of Agricultural Processing* Vikas Publ. House.
- Singh RP & Heldman DR. 1993. *Introduction to Food Engineering*. Academic Press.

**Teaching Plan :**

**WEEK 1- 5** Properties of Foods and Processing

**WEEK 6-10** Unit Operations n Food Processing

**WEEK 11-12** Food Packaging

**Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the basic concepts of properties of foods and basic food engineering concepts	Lectures, discussions	<ul style="list-style-type: none"> <li>• Practical and test</li> </ul>
2.	Acquire the knowledge of various unit operations in food processing.	Lectures, discussions based on industrial processing, Industrial Visits	<ul style="list-style-type: none"> <li>• Presentation/quiz</li> <li>• Visit report</li> </ul>
3.	Gain the knowledge of food packaging and its interaction with food products	Lectures, discussions,	<ul style="list-style-type: none"> <li>• Presentation</li> <li>• Practicals on packaging material testing</li> </ul>

**PRACTICAL**

**Maximum Marks: 50**

**Duration: 3 hours**

- Methods of grading and cleaning of raw materials (grains, spices, fruits and vegetables).
- Viscosity by viscometer
- Density measurement of food
- Dough rheology, amylase activity
- Food plant design
- Determination of thermal properties of foods such as thermal conductivity, thermal diffusivity, calorific value and specific heat
- Calculation of freezing time for some typical foods
- Market survey of packaging equipment/ processing by heat/ processing by low temperature
- Visit to bread and biscuit industry to observe mixing and forming operation and their equipment

**Suggested Readings:**

- Brennan JG, Butter JR, Corell ND & Lilly AVE. 1990. *Food Engineering Operations*. Elsevier.
- Charm SE, McCabe WL, Smith JC & Harriott P.1993. *Unit Operations of Chemical Engineering*. McGraw Hills.
- Earle RL. 1985. *Unit Operations in Food Processing*. Pergamon Press.
- Fellows P. 1988. *Food Processing Technology*. VCH Ellis Horwood.
- Heldman DR & Singh RP.1995. *Food Process Engineering*. AVI Publ.
- McCabe WL & and Smith JC. 1971. *Fundamental of Food Engineering*. AVI Publ.

- Sahay KM & Singh KK. 1994. *Unit Operation of Agricultural Processing*. Vikas Publ. House.
- Singh RP & Heldman DR. 1993. *Introduction to Food Engineering*. Academic Press.

## FOOD PROCESSING TECHNOLOGY-I

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:** To gain in depth knowledge of technological aspects involved in processing of cereals, bakery products, meat, fish, poultry and eggs.

### Course Learning Outcomes:

1. The course intends to provide knowledge of cereals and animal food processing.
2. Students will learn the processes and ingredients involved in breads, cakes and biscuit processing industry.
3. The course will train students to analyse all quality aspects of cereals and animal foods.
4. Students will gain knowledge of methods of preservation of meat, fish and poultry along with value added products from meat industry.

### CONTENTS

### PERIODS

#### Unit I: Technology of cereals, Legumes and oils

15

- **Introduction to Wheat:** Structure, types/varieties, harvesting, physical & chemical properties, composition and commercial value.
- **Introduction to other cereals and millets:** Rice, maize, oats, rye, corn, pearl millet; their nutritional importance and commercial value (Puffed rice, Rice flakes, parboiling of rice, extruded and fortified rice).
- **Milling of wheat:** Roller milling process, flour grade, flour treatments (bleaching, maturing), flour for various purposes, Products and By-products.

**Unit II: Introduction to Baking technology:** Types of bakery products, nutritional quality and safety of products, pertinent standards & regulations.

15

- **Bread, cakes, biscuits /crackers:** Role of ingredients & processes, equipment used, product quality characteristics, scoring of quality parameters, faults and corrective measures.
- **Breakfast cereals, macaroni products and malt.** Production and quality of breakfast cereals and macaroni products.

#### UNIT III: Technology of meat, fish, poultry, egg and their products

18

- **Meat:** Composition, variety, pre-slaughter handling, slaughtering and related practices, hygiene and sanitation practices of slaughter houses, grading, ageing, curing, smoking and tenderizing of meat, meat pigments and colour changes and methods of preservation for value addition and concerns of antibiotic residues.
- **Poultry:** Production considerations, Processing plant operations (slaughter, bleeding, scalding, defeathering, eviscerating, chilling and packaging), tenderness and storage.
- **Eggs:** Composition, quality factors, storage, bacterial infection and pasteurization, freezing, drying and egg substitutes.
- **Fish:** Composition, on-board handling & preservation, drying and dehydration, curing, smoking, marinades, fermented products, canning, Modified Atmosphere Packaging, and

quality factors.

**Suggested Readings:**

- Akoh C C and Swanson B.G. Carbohydrates Polyesters as Fat Substitutes, Marcal Deker, Inc, New York.
- Fabriani, G and Lintas C. (1988) Durum Wheat Chemistry and Technology. American Association of Cereal Chemistry Inc.
- Kent N L.(1993) Technology of Cereals. 4th Edi. Pergamon Press.
- Olson, V M; Shemwell G A and Pasch, S (1998) Egg and Poultry Meat Processing, VCH P, New York
- Winton & Winton, (1991) Techniques of Food Analysis. Allied Scientific Publishers.
- Balachandran K K. (1941) Post Harvest Technology of Fish and Fish Products. Daya Publishing House, NewDelhi.
- Stadelman WJ. (1998). Egg and Poultry Meat Processing. VCH, New York.
- Bechtel, PJ. (1986). Muscle as Food. Academic Press, Orlando, FL.
- Matz A Samuel, Bakery Technology and Engineering.
- Pomeranz Yeshuraj, Food Analysis: Theory and Practice.

**Teaching Plan**

**Week 1** Unit I: technology of cereals, legumes and oilseeds- introduction to wheat: structure, types/varieties, harvesting, physical & chemical properties, composition and commercial value.

**Week 2** Introduction to other cereals and millets: rice, maize, oats, rye, corn, pearl millet; their nutritional importance and commercial value.

**Week 3** Milling of wheat: roller milling process, flour grade, flour treatments (bleaching, maturing), flour for various purposes, products and by-products.

**Week 4** Legumes and oilseeds: composition, anti-nutritional factors, processing and storage; processing for production of edible oil, meal, flour.

**Week 5** Introduction to baking technology: types of bakery products, nutritional quality and safety of products, pertinent standards & regulations.

**Week 6** Bread: Role of ingredients & processes, equipment used, product quality characteristics, scoring of quality parameters, faults and corrective measures.

**Week 7** Cakes: role of ingredients & processes, equipment used, product quality characteristics, scoring of quality parameters, faults and corrective measures.

**Week 8** Biscuits /crackers: role of ingredients & processes, equipment used, product quality characteristics, scoring of quality parameters, faults and corrective measures.

**Week 9** Breakfast cereals, macaroni products and malt (6 lectures). Production and quality of breakfast cereals and macaroni products.

**Week 10** Technology of meat, fish, poultry, egg and their products- meat: composition, variety, pre-slaughter handling,

**Week 11** Slaughtering and related practices, hygiene and sanitation practices of slaughter houses, grading, ageing, curing smoking and tenderizing of meat, meat pigments and colour changes and methods of preservation for value addition and concerns of antibiotic residues.

**Week 12** Poultry: production considerations, processing plant operations

**Week 13** Poultry- slaughter, bleeding, scalding, defeathering, eviscerating, chilling and packaging), tenderness and storage.

**Week 14** Eggs: composition, quality factors, storage, bacterial infection and pasteurization, freezing, drying and egg substitutes.

**Week 15** Fish: composition, on-board handling & preservation, drying and dehydration,

curing, smoking, marinades.

**Week 16** Fermented products, canning, modified atmosphere packaging, and quality factors.

**Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Imparting knowledge of processing, quality and technology of cereals, legumes and oilseeds	Lectures, discussions and visit to cereals processing industry	<ul style="list-style-type: none"> <li>• Assessment of quality of cereals-practical based</li> <li>• Visit report</li> </ul>
2.	Learning baking technology of breads, cakes and biscuits with focus on industrial production of these products.	Lectures, discussions based on industrial uses/ industrial processing	<ul style="list-style-type: none"> <li>• Presentation/quiz</li> <li>• Practicals on quality aspects of baked products</li> </ul>
3.	Learning technological aspects of processing of meat, fish, poultry and eggs.	Lectures, discussions,	<ul style="list-style-type: none"> <li>• Presentation</li> <li>• Practicals on quality</li> </ul>

**PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**CONTENTS**

**PERIODS**

**Unit I: Technology of cereals and cereal products**

**3**

- Quality testing of wheat flour: Gluten quality and quantity, moisture, ash, water Absorption Power (WAP), Pekar color test, maltose value, falling number, Dough Raising Capacity (DRC).

**Unit II: Introduction to baking technology**

**11**

- Bread Processing: Straight dough method, sponge & dough method (delayed salt method) and use of improvers in bread, optimisation of brown bread process, preparation of sweet buns/pizza base/ Nan/French pao.
- Biscuits: Short and hard dough biscuits, their quality parameters packaging and shelf life study.
- Cakes: Sponge and cream cakes/ eggless cakes, their quality parameters, packaging and shelf life study.
- Others such as cookie, nan-khatai

**Unit III: Technology of meat, fish, poultry, egg and their products**

**1**

Study of Quality of meat, fish, poultry and eggs.

**Suggested Readings:**

- Kent, N.L. 2003. *Technology of Cereal*, 5th Ed. Pergamon Press.

- Chakraverty. 1988. *Post -harvest Technology of Cereals, Pulses and Oilseeds*, revised Ed., Oxford & IBH Publishing Co. Pvt Ltd.
- Marshall, *Rice Science and Technology*. 1994. Wadsworth Ed., Marcel Dekker, New York.
- Manay, S. and Sharaswamy, M. 1987. *Food Facts and Principles*. Wiley Eastern Limited.
- Dubey, S.C. (2007). *Basic Baking* 5th Ed. Chanakya Mudrak Pvt. Ltd.
- Raina et.al. (2003). *Basic Food Preparation-A complete Manual*. 3rd Ed. Orient Longman Pvt. Ltd.
- BIS standards of wheat, biscuits and cakes.
- Manuals of methods of analysis of various food products, FSSAI, 2016

**SEMESTER-IV**

<b>Semester IV</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 15 FNCC 415 Dissertation/Experiential Learning Project		4		4
Total credits in core course	4			
Number of elective courses**	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Group A Elective Course 3	4	2		6
Group A Elective Course 4	4	2		6
Group A Elective Course 5	4	2		6
Group B Elective Course 3	4	2		6
Group B Elective Course 4	4	2		6
Group B Elective Course 5	4	2		6
Group C Elective Course 3	4	2		6
Group C Elective Course 4	4	2		6
Group C Elective Course 3	4	2		6
Total credits in elective courses	18			
Total credits in Semester IV 22				
TOTAL CREDITS IN SEMESTER I/II/III/IV : 98				

**Elective courses for Semester IV (Choose three elective papers of one specialization i.e A/B/C)**

Group A Elective Course 3: FNEC 403 A: Advanced Clinical Nutrition

Group A Elective Course 4: FNEC 404 A: Nutrition Communication and Diet Counseling

Group A Elective Course 5: FNEC 405 A: Nutrition for Fitness and Sports

***Department of Home Science, University of Delhi***

Group B Elective Course 3: FNEC 403 B: Problems, Policies and Programmes in Public Health Nutrition

Group B Elective Course 4: FNEC 404 B: Nutritional Epidemiology

Group B Elective Course 5: FNEC 405 B: Nutrition Communication for Health Promotion

Group C Elective Course 3: FNEC 403 C: Food Processing Technology -II

Group C Elective Course 4: FNEC 404 C: Advanced Food Science

Group C Elective Course 5: FNEC 405 C: Applied Food Microbiology

## DISSERTATION/ PROJECT WORK

**Marks : 100**

**Duration: 3 Hrs**

### Course Objectives

The aim of dissertation is to develop skills in conducting a research study/ working in a project and learn the process of writing a dissertation/ project report

### Course Learning Outcomes

Student will be able to

1. Know the practical aspects of, collecting data/ project work
2. Evaluate, select and use appropriate strategies for reduction, analysis and presentation of data collected during research process/ project work
3. Suitably illustrate data/ insights using various graphical and other methods.
4. Prepare a dissertation document/ project report based on research process/ project work done.

Students will be given an option of doing either

A) Dissertation or B) Project work in a chosen area congruent to their discipline/ field of study.

The research will be an original work with plagiarism check and ethical clearance.

## ADVANCED CLINICAL NUTRITION THEORY

**Marks: 100**

**Duration: 3 hours**

### Course Objectives:

To understand the etiology, physiological and metabolic anomalies and provide appropriate nutrition care for prevention and treatment of various disorders / diseases

### Course Learning Outcome:

Students will be able to-

1. Develop a detailed understanding of the etiology, physiological and metabolic anomalies of various acute and chronic disorders / diseases
2. Demonstrate competency in nutrition assessment and diet history interview skills
3. Develop understanding and expertise on the effect of various disorders on nutritional status, nutritional and dietary requirements
4. Use critical thinking and clinical reasoning to develop nutritional care plan for prevention and treatment of various disorders / diseases
5. Apply the nutrition care process to the medical nutritional therapy of nutritionally vulnerable individuals using best evidence.

## CONTENTS

## PERIODS

### UNIT I: Nutrition Care

4

- Nutrition Support – Parenteral Nutrition

### UNIT II: Hepatobiliary and Pancreatic Disorders

10

- Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications and recent advances in prevention, treatment, MNT and dietary counseling in Nonalcoholic fatty liver disease (NAFLD), Cirrhosis, End stage liver disease (ESLD), Encephalopathy, Liver resection and transplant; Cholecystitis, Cholelithiasis, cholecystectomy, Pancreatitis.

**Unit III: Diseases of Heart and Blood Vessels** 10

- Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications and recent advances in prevention, treatment, MNT and dietary counselling in Myocardial Infarction, Coronary artery bypass graft (CABG), angioplasty, cerebrovascular and peripheral vascular disease, heart transplant

**UNIT IV: Surgery and Critical Care** 8

- Metabolic & clinical aberrations, diagnosis, complications, treatment, MNT and dietary counseling in Metabolic Stress -Surgery, Burns, Sepsis and Trauma, Critical care

**Unit V: Renal Disorders** 12

- Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications and recent advances in prevention, treatment, MNT and dietary counseling in Nephrotic Syndrome, Glomerulonephritis, Acute Renal Failure, Chronic Kidney Disease, End Stage Renal Disease (ESRD), Dialysis, Transplant, Renal Stones.

**Unit VI: Neurological disorders** 4

- Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications and recent advances in prevention, treatment, MNT and dietary counseling in Alzheimer's disease, Parkinson disease, Epilepsy

**Suggested Readings:**

- Mahan, L. K. and Escott Stump. S. (2016) *Krause's Food & Nutrition Therapy 14<sup>th</sup> ed.* Saunders-Elsevier
- Joshi Y K.(2008) *Basics of Clinical Nutrition 2<sup>nd</sup> ed.* Jaypee Brothers Medical Publishers
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) *Modern Nutrition in Health and Disease. 10<sup>th</sup> ed.* Lipincott, William and Wilkins.
- Gibney MJ, Elia M, Ljungqvist & Dowsett J. (2005) *Clinical Nutrition.* The Nutrition Society Textbook Series. Blackwell Publishing Company
- Garrow, J.S., James, W.P.T. and Ralph, A. (2000) *Human Nutrition and Dietetics. 10<sup>th</sup> ed.* Churchill Livingstone.
- Marian M, Russel M, Shikora SA. (2008) *Clinical Nutrition for Surgical Patients.* Jones and Bartlett Publishers.

**Teaching Plan:**

Week 1: Nutritional support- Parental nutrition

Week 2: Metabolic & clinical aberrations, diagnosis, complications, treatment, MNT and dietary counseling in metabolic stress -surgery, burns, sepsis and trauma

Week 3: Medical nutrition therapy in Critical Care

Week 4: Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Nonalcoholic fatty liver disease (NAFLD), Cirrhosis

Week 5: Etiopathophysiology, metabolic & clinical aberrations, diagnosis Complications and recent advances in prevention, treatment, MNT and dietary counseling in End stage liver disease (ESLD), Encephalopathy, Liver resection and transplant

Week 6: Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Cholecystitis, Cholelithiasis, cholecystectomy, Pancreatitis, Myocardial Infarction

Week 7: Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Coronary artery bypass graft (CABG), Angioplasty

Week 8: Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Cerebrovascular and peripheral vascular disease, heart transplant

Week 9: Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Nephrotic Syndrome, Glomerulonephritis

Week 10: Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Acute, Renal Failure, Chronic Kidney Disease

Week 11: Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Dialysis, Transplant, Renal Stones

Week 12: Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications and recent advances in prevention, treatment, MNT and dietary counseling in Alzheimer's disease, Parkinson disease, Epilepsy

### **Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Develop a detailed understanding of the etiology, physiological and metabolic anomalies of various acute and chronic disorders / diseases	Discussion	Assignment on etiology, physiological and metabolic anomalies of various acute and chronic disorders / diseases
2.	Demonstrate competency in nutrition assessment and diet history interview skills	Discussion	Assignment and practice interactive sessions in nutrition assessment and diet history interview skills
3.	Develop understanding and expertise on the effect of various disorders on nutritional status, nutritional and dietary requirements	Discussion	Assignment on various disorders on nutritional status, nutritional and dietary requirements

4.	Use critical thinking and clinical reasoning to develop nutritional care plan for prevention and treatment of various disorders / diseases	Discussion	Diet plans for prevention and treatment of various disorders / diseases
5.	Apply the nutrition care process to the medical nutritional therapy of nutritionally vulnerable individuals using best evidence.	Discussion	Planning medical nutritional therapy of nutritionally vulnerable individuals using best evidence.

### PRACTICAL

**Marks: 50**

**Duration: 3 hours**

#### Course Objectives:

To enable students to develop skill in nutritional diagnosis, planning and providing suitable preventive/ therapeutic diets for various diseases / disorders

#### Course Learning Outcome:

Student will be able to-

1. Develop skill in nutritional diagnosis, planning and providing suitable preventive/ therapeutic diets for various diseases / disorders
2. To provide effective dietary counseling for these disorders
3. To be aware of various commercial nutritional therapeutic products available in the market

#### CONTENTS

#### PERIODS

<b>UNIT I:</b> Market Survey for commercial nutritional therapeutic products	1
<b>UNIT II:</b> Planning & preparation of diets for the following conditions:	11
<ul style="list-style-type: none"> <li>• Post burn</li> <li>• Liver Cirrhosis</li> <li>• Hepatic Encephalopathy</li> <li>• Pancreatitis</li> <li>• Myocardial infarction</li> <li>• Congestive heart failure</li> <li>• Nephritis</li> <li>• Acute Renal Failure</li> <li>• Chronic renal failure</li> <li>• Patients on dialysis</li> </ul>	

#### Suggested Readings:

- Dorland WA Newman. (2003) *Dorland's Illustrated Medical Dictionary. 30<sup>th</sup> ed.* WB Saunders Co.
- Escott-Stump, S. (2002) *Nutrition and Diagnosis Related Care. 5<sup>th</sup> ed.* Williams and Wilkins.

- Garrow, J.S., James, W.P.T. and Ralph, A. (2000) *Human Nutrition and Dietetics*. 10<sup>th</sup> ed. Churchill Livingstone.
- Mahan, L. K. and Escott Stump. S. (2016) *Krause's Food & Nutrition Therapy* 14<sup>th</sup> ed. Saunders-Elsevier
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) *Modern Nutrition in Health and Disease*. 10<sup>th</sup> ed. Lipincott, William and Wilkins.
- Williams, S.R. (2001) *Basic Nutrition and Diet Therapy*. 11<sup>th</sup> ed. Times Mirror Mosby College Publishing
- Davis, J. and Sherer, K. (1994) *Applied Nutrition and Diet Therapy for Nurses*. (2<sup>nd</sup> ed). W. B. Saunders Co.
- Fauci, S.A et al (1998) *Harrison's Principles of Internal Medicine*, 14<sup>th</sup> ed. McGraw Hill.
- Guyton, A.C and Hall, J.E. (2000) *Textbook of Medical Physiology*. 10<sup>th</sup> ed. India: Harcourt Asia.
- Ritchie, A.C (1990) *Boyd's Textbook of Pathology*. 9<sup>th</sup> ed. Lea and Febiger, Philadelphia
- World Cancer Research Fund & American Institute for cancer research (2007) *Food, Nutrition, Physical Activity and the Prevention of Cancer- A Global Perspective*. Washington E.D. WCRF.
- Gibson SR. (2005). *Principles of Nutritional Assessment*. 2<sup>nd</sup> Edition. Oxford University press
- Gibney MJ, Margetts BM, Kearny JM & ArabI. (2004) - *Public Health Nutrition*. NS Blackwell publishing
- Gibney MJ, Elia M, Ljungqvist & Dowsett J. (2005) *Clinical Nutrition*. The Nutrition Society Textbook Series. Blackwell publishing Company
- Marian M, Russel MK, Shikora SA. (2008) *Clinical Nutrition for Surgical Patients*. Jones & Bartlett Publisher

## **NUTRITION COMMUNICATION AND DIET COUNSELING THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To equip students to understand the influence of counseling on disease management and identify components of counselling skills and to provide skills of counselling for specific disease conditions

### **Course Learning Outcomes:**

The students will be able to:

1. Gain knowledge on the basics of communication strategies and best suited methods of communicating with individuals to select appropriate strategies presented with dietary problems
2. Understand the importance of BCC in managing nutrition related problems
3. Draw out a complete counseling plan for individuals based on their physiological conditions using the appropriate tools
4. Understand how best to maintain adherence to changed dietary practices for specific

physiological conditions

5. Gain knowledge on traditional and alternate methods to manage disorders

**CONTENTS**

**PERIODS**

**UNIT I: Basics of Communication**

**12**

- Meaning of Communication, Forms of communication: Verbal and Non-verbal Communication
- Communication methods
- Traditional, Current and Emerging methods/tools of communication
- Characteristics of effective communication, Skills and attributes of a communicator
- Approaches in communication
- Barriers to effective communication

**UNIT II: Nutrition Counselling**

**10**

- Concept and importance of counseling in the nutrition care process
- Understanding dietary patterns and food choices and their impact on counseling
- Behaviour Change Communication and Models for behaviour change
- Counseling strategies
- Factors to be considered for counseling
- Conventional and non-conventional tools in counseling

**UNIT III: Processes involved in dietary counselling**

**6**

- Managing resources of the communicator/counselor
- Designing of counseling plans – goals & objectives, evaluation instruments.
- Implementation: facilitating self-management of disease condition
- Evaluation: evaluating adherence to dietary changes
- Counseling approaches after evaluation

**UNIT IV: Dietary counseling through the life span**

**16**

- Considerations for counseling plans for:
- Prenatal and pregnant women
- Lactating women
- Childhood nutrition problems like
- SAM, weight management, vitamin and mineral deficiencies
- School children, adolescents, young adults
- fitness, weight management, eating disorders
- Managing diet related chronic diseases in adults:
- Obesity
- Diabetes
- dyslipidemia
- hypertension
- cancer risk prevention
- renal disease
- liver disorders
- Geriatric counseling

**UNIT V: Nutritional/medicinal role of traditional foods: traditional food beliefs, role of Ayurveda, Naturopathy, Yoga and other traditional medicines in disease management**

4

**Suggested Readings:**

- Mahan, L. K. and Escott Stump. S. (2016) Krause's Food & Nutrition Therapy 14th ed. Saunders-Elsevier
- Snetselaar L. (2009). Nutrition Counseling Skills for the Nutrition Care Process. Fourth Ed. Sudbury, Massachusetts: Jones Bartlett Publishers.
- Holli B Betsy and Beto A Judith. (2014). Nutrition Counseling and Education Skills for Dietetics Professionals. Sixth edition. USA: Lippincot Williams and Wilkins; Wolters Kluwer.
- Gable J. (2016). Counseling Skills for dietitians. Florida, USA: JohnWiley and Sons.
- Midwinter R and Dickson J.(2015). Embedding Counseling and Communication Skills. A Relational Skills Model. Routledge 2015
- Devito Joseph A. (2015) Human Communication: The Basic Course. New York:Pearson
- King K and Klawitter B.(2007). Nutrition Therapy. Advanced Counseling Skills. Third Edition. Philadelphia, USA: Lippincot Williams and Wilkins; Wolters Kluwer. 2007
- <http://www.fao.org/docrep/X2550E/X2550e04.htm>

**Teaching Plan:**

Week 1: Meaning of Communication, Forms of communication: Verbal and Non-verbal Communication, Communication methods: Intrapersonal, Interpersonal and Mass communication

Week 2: Traditional, Current and Emerging methods/tools of communication, Characteristics of effective communication, Skills and attributes of a communicator

Week 3: Approaches in communication: Informative, Educative, persuasive and prompting, Barriers to effective communication: physical, intellectual, emotional, environmental, cultural

Week 4: Meaning and concept and importance of counseling in the nutrition care process, Understanding dietary patterns and food choices and their impact on counseling

Week 5: Counseling for behaviour change : Models for behavior change- Health belief model, Social Cognitive Theory, Theory of Planned behavior, Transtheoretical Model of Change

Week 6: Factors to be considered for counseling, Managing resources of the facilitator/counsellor, Designing of counseling plans – goals & objectives, planning client care and designing evaluation instruments.

Week 7: Implementation, Evaluation, Counseling approaches after assessment

Week 8: Considerations for counseling for Prenatal and pregnant women, Lactating women

Week 9: Considerations for counseling for Childhood nutrition problems and School children, adolescents, young adults

Week 10: Managing diet related chronic diseases in adults: Obesity, Diabetes, dyslipidemia , hypertension

Week 11: Considerations for counseling for Managing diet related chronic diseases in adults and geriatric counseling

Week 12: Nutritional/medicinal role of traditional foods: traditional food beliefs, role of Ayurveda, Naturopathy, Yoga and other traditional medicines in and disease management

**Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
I	To gain knowledge on the basics of communication strategies and best suited methods of communicating with individuals to select appropriate strategies presented with dietary problems	Discussion	Assignment on methods of communications
II	To understand the concept of BCC in nutrition	Discussion	Group discussions on theories of BCC
III	Draw out a complete counseling plan for individuals based on their physiological conditions using the appropriate tools	Discussion on overall plan with case studies	Practical preparation of counselling plans for a hypothetical situation
IV	Understand how best to maintain adherence to changed dietary practices for specific physiological conditions	Discussion on case studies for each condition	Student presentations and assignments.
V	To gain knowledge on traditional and alternate methods to manage disorders	Discussion	Group discussions on various alternate methods of medicine in India

### PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

#### Course Objectives:

To gain practical knowledge in preparing counseling sessions for selected conditions and to identify appropriate counseling strategies for different age groups and physiological conditions

#### Course learning Outcome:

The students will be able to-

1. Acquire knowledge in different methods of counseling
2. Plan counseling sessions for different physiological conditions

#### CONTENT

#### PERIODS

**UNIT I:** Understanding the use of conventional and non-conventional methods of counseling

2

- Face to face counseling
- Use of a software for counseling e.g Dietcal
- Use of any one Diet App for counseling and assessing food intake

**UNIT II:** Planning Nutrition counseling sessions and identifying ways to adhere to dietary changes for the following conditions:

10

- IYCF, Lactation counseling, SAM
- Eating Disorders
- Overweight/Obesity in School children, adolescent and adults
- Metabolic Syndrome
- Diabetes: Type 1, Type 2 and Gestational Diabetes
- Renal Disease: CKD/ESRD/Post kidney Transplant
- Liver Disorders: NAFLD

**Suggested Readings:**

- Mahan, L. K. and Escott Stump. S. (2016) *Krause's Food & Nutrition Therapy* 14th ed. Saunders-Elsevier
- Snetselaar L. (2009). *Nutrition Counseling Skills for the Nutrition Care Process*. Fourth Ed. Sudbury, Massachusetts: Jones Bartlett Publishers.
- Holli B Betsy and Beto A Judith. (2014). *Nutrition Counseling and Education Skills for Dietetics Professionals*. Sixth edition. USA: Lippincot Williams and Wilkins; Wolters Kluwer.
- Gable J. (2016). *Counseling Skills for dietitians*. Florida, USA: JohnWiley and Sons.
- Midwinter R and Dickson J.(2015). *Embedding Counseling and Communication Skills. A Relational Skills Model*. Routledge 2015
- Devito Joseph A. (2015) *Human Communication: The Basic Course*. New York:Pearson
- King K and Klawitter B.(2007). *Nutrition Therapy. Advanced Counseling Skills*. Third Edition. Philadelphia, USA: Lippincot Williams and Wilkins; Wolters Kluwer. 2007
- <http://www.fao.org/docrep/X2550E/X2550e04.htm>

**NUTRITION FOR FITNESS AND SPORTS  
THEORY**

**Marks : 100**

**Duration : 3 hrs**

**Course Objectives**

To learn the concepts of fitness, methods of assessing fitness, exercises for physical fitness and bioenergetics of exercise and role of macro- and micro-nutrients in sports performance and to gain knowledge & application skills with respect to nutrition for high performance sports, through the life-cycle and diet & nutritional care of special groups of athletes.

**Course Learning Outcomes:**

Students will be able to:

1. Understand concepts of fitness, its assessment and exercises for physical fitness training.
2. Function effectively as a sports dietitian, with knowledge and skills, to support recreational and competitive athletes
3. Exhibit knowledge of the metabolism and bioenergetics of exercise and continuum in various sports
4. Successfully plan, implement and monitor sport-specific diets for athletes through all age groups
5. Provide diet and nutritional care in terms of nutrition education, diet plans and counselling to special groups of athletes

**CONTENTS**

**PERIODS**

- **UNIT I: Introduction to physical fitness** **6**  
Definition of physical fitness
- Components of physical fitness

- Methods of assessing physical fitness
- Approaches to achieving physical fitness through the life cycle

**UNIT II: Fundamentals of Sports Nutrition: 14**

- Integrated approach to care for athletes
- Assessment of Sports performance
- Bioenergetics and body metabolism of physical activity and sports
- Macro- and micro nutrients for sport performance
- Temperature regulation, fluid balance, fluid requirements of athletes and rehydration strategies for sports

**UNIT III: Nutrition for high performance athletes: 20**

- Recommended allowances and nutritional guidelines for different categories of high performance sports
- Nutritional care during Training, weight management and day-to-day recovery
- Nutrition for the Pre-competition, Competition and post competition recovery phase
- Supplements in Sport :performance enhancing substances ,drugs, ergogenic aids and herbs in sports performance

**UNIT IV: Challenges in Sports Nutrition: 8**

- Nutritional care for children and adolescent athletes
- Athletes with special needs- Paralympics & special Olympics, vegetarian athletes,
- Athletes with eating disorders, athletes with diabetes and other medical conditions , management of Red-S.

**Suggested Readings:**

- ILSI, NIN &SAI. (2017) *Nutritional recommendations for high performance athletes 2<sup>nd</sup> ed.*
- Mahan, L. K. and Escott Stump S. (2016) *Krause's Food & Nutrition Therapy. 14<sup>th</sup> ed.* Saunders-Elsevier.
- Hickson JF and Wolinsky I. (1997) *Nutrition for exercise and Sport. 2<sup>nd</sup> ed.* CRC Press,
- Burke LM and Deakin V. (2002) *Clinical Sports Nutrition, 2nd edition,* Publishers McGraw Hill
- Dan Benardot. (2011) *Advanced Sports Nutrition-2nd Edition.*
- Fink H H and Mikesky A E. (2017) *Practical Applications in Sports Nutrition 5th Edition.*
- [Bushman](#) B. (2017) *ACSM's Complete Guide to Fitness & Health 2nd Edition,* Published by ACSM.

**Teaching Plan:**

**Week 1:** Definition of physical fitness, Components of physical fitness, Methods of assessing physical fitness

**Week 2:** Approaches to achieving physical fitness through the life cycle, Assessment of Sports performance

**Week 3:** Bioenergetics and body metabolism of physical activity and sports

**Week 4:** Macro- and micro nutrients for sport performance

**Week 5:** Temperature regulation, fluid balance, fluid requirements of athletes and rehydration strategies for sports

**Week 6:** Recommended allowances and nutritional guidelines for different categories of high performance sports

**Week 7:** Nutritional care during Training, and day-today recovery

**Week 8:** Nutrition for the Pre-competition, Competition and post competition recovery phase

**Week 9:** Weight management in athletes

**Week 10:** Supplements in Sport :performance enhancing substances ,drugs, ergogenic aids and herbs in sports performance

**Week 11:** Nutritional care for children and adolescent athletes, Athletes with special needs- Paralympics & special Olympics, vegetarian athletes,

**Week 12:** Managing athletes with eating disorders , and Red-S., Dietary care for athletes with diabetes and other medical conditions

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
<b>I</b>	Develop concepts of physical fitness, its components, skills in assessment and exercises to improve physical fitness	Various fitness exercises and assessments in groups	<ul style="list-style-type: none"> <li>• Assessment scores of partners' physical fitness.</li> <li>• Test on the topic</li> </ul>
<b>II</b>	Exhibit knowledge of metabolism & nutritional care for athletes and demonstrate skills of assessing sports performance	Demonstration and discussion	<ul style="list-style-type: none"> <li>• Test on knowledge domain</li> <li>• Assessment using skills learnt- case study</li> </ul>
<b>III</b>	Develop in- depth understanding and critically evaluate and apply nutritional recommendations for different categories athletes, during various phases and a comprehensive view on supplements in Sport	Presentations, discussions and surveys	Class assignments, scrap books, survey reports and diet plans
<b>IV</b>	Understand comprehensively, needs of children, adolescents and special groups in sports training	Discussion	Diet plans for junior athletes and athletes with special needs

### **PRACTICAL**

**Marks: 50**

**Duration: 3 hours**

#### **Course Objectives**

To apply knowledge of Sports nutrition to plan diets for sport-specific training, pre-competition, competition and recovery and to gain skills for counselling of individual athlete through various phases

#### **Course learning outcomes:**

Students will be able to-

1. Apply knowledge of Sports nutrition to plan diets for sport-specific training, pre-competition, competition and recovery.
2. Gain skills for counselling of individual athlete through various phases
3. Learn skills for care of special groups of athletes.

### PRACTICALS

### PERIODS

- |                                                                                                                                                        |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1. PARQ assessment and interpretation for fitness                                                                                                      | 1 |
| 2. Planning a day's diet for a fitness trainee who works out twice in a gymnasium                                                                      | 1 |
| 3. Planning a training day's diet for an individual high performance athlete (any one sport- (cover all categories of sports in groups)                | 1 |
| 4. Planning a weight loss diet for a high performance athlete                                                                                          | 1 |
| 5. Planning a counseling module for the training phase for a high performance athlete any one sport (cover all categories of sports in groups)         | 1 |
| 6. Planning a diet for 1 week of carbohydrate loading for an ultra-endurance athlete                                                                   | 1 |
| 7. Planning a pre-, and post-competition meal for ultra-endurance, endurance, strength events, team events and sports-drinks during and after an event | 1 |
| 8. Planning a diet for multiple events like swimming competitions                                                                                      | 1 |
| 9. Survey of sports supplements                                                                                                                        | 1 |
| 10. Planning an education module for special groups of athletes : Diabetes, special needs                                                              | 1 |
| 11. Cooking 1                                                                                                                                          | 1 |
| 12. Cooking 2                                                                                                                                          | 1 |

### Suggested Readings:

- ILSI, NIN & SAI. (2017) *Nutritional recommendations for high performance athletes 2<sup>nd</sup> ed.*
- Mahan, L. K. and Escott Stump S. (2016) *Krause's Food & Nutrition Therapy 14<sup>th</sup> ed.* Saunders-Elsevier.
- Hickson JF and Wolinsky I. (1997) *Nutrition for exercise and Sport 2<sup>nd</sup> ed.* CRC Press.
- Burke LM and Deakin V. (2002) *Clinical Sports Nutrition, 2nd edition*, Publishers McGraw Hill.
- Dan Benardot. (2011) *Advanced Sports Nutrition-2nd Edition.*
- Fink H H and Mikesky A E. (2017) *Practical Applications in Sports Nutrition 5th Edition.*
- Bushman B. (2017) *ACSM's Complete Guide to Fitness & Health 2nd Edition*, Published by ACSM.

### PROBLEMS, POLICIES AND PROGRAMMES IN PUBLIC HEALTH NUTRITION THEORY

Marks : 100

Duration : 3 Hrs

### Course Objectives:

This course will enable the students to become familiar with the prevalence and determinants of nutritional/ health problems in the population. They will learn about the public health implications of various nutritional problems and the strategies to overcome the same. The students will also get acquainted with the various national/ public sector policies and programmes for promotion of health and nutritional status in India.

### Course Learning Outcomes:

The students will:

1. Become familiar with the prevalence and determinants of nutritional/ health problems in the population.
2. Acquire knowledge about the public health implications of various nutritional problems and the strategies to overcome the same.
3. Get acquainted with national/ public sector policies and programmes for promotion of health and nutritional status in India.

## **CONTENTS**

## **PERIODS**

### **Unit I: Public Health Aspects of Undernutrition**

**18**

- Etiology, public health implications, prevention and community based management of Protein Energy Malnutrition, Chronic Energy Deficiency, Severe Acute Malnutrition and micronutrient deficiencies of public health significance

### **Unit II: Public Health Aspects of Life Style Related Disorders**

**8**

- Public health implications and preventive strategies for obesity, hypertension, coronary heart disease, diabetes, osteoporosis, cancer and dental caries

### **Unit III: National / Public Sector Policies for Promotion of Nutrition and Health Status of the Population**

**8**

- National Nutrition Policy, National Nutrition Mission, National Health Policy, National Food Security Act, National Water Policy, National Urban Sanitation Policy.

### **Unit IV: National / Public Sector Programmes for Promotion of Nutrition and Health Status of the Population**

**14**

- Nutrition sensitive and nutrition specific programmes
- Critical appraisal of ongoing public sector programmes and some success stories

### **Suggested Readings:**

- Gibney M.J., Margetts, B.M., Kearney, J. M. Arab, I., (Eds) (2004) *Public Health Nutrition*, NS Blackwell Publishing.
- National Consensus Workshop on Management of SAM children through Medical Nutrition Therapy (2009)-Compendium of Scientific Publications Volume I and II. Jointly organized by AIIMS, Sitaram Bhartia Institute of Science and Research, IAP (Subspeciality chapter on Nutrition), New Delhi. Sponsored by DBT.
- National Nutrition Policy, GoI. [http://wcd.nic.in/sites/default/files/nnp\\_0.pdf](http://wcd.nic.in/sites/default/files/nnp_0.pdf)
- Park, K. (2017) *Park's Textbook of Preventive and Social Medicine*, 24th edition. Banarsidas Bhanot Publishers.
- Vir, S.C. (Ed.). (2011). *Public Health Nutrition in Developing Countries*. Part 1 and 2. Woodhead Publishing India.

Teaching Plan:

Week 1-4 Public Health Aspects of Undernutrition

Etiology, public health implications, prevention and community based management of Protein Energy Malnutrition, Chronic Energy Deficiency, Severe Acute Malnutrition and micronutrient deficiencies of public health significance

Week 5 -6 Public Health Aspects of Life Style Related Disorders

Week 6-7 National / Public Sector Policies for Promotion of Nutrition and Health Status of the Population

Week 8-12 National / Public Sector Programmes for Promotion of Nutrition and Health Status of the Population

**Facilitating the achievement of Course Learning Outcomes**

UNIT NO.	COURSE LEARNING OUTCOMES	TEACHING AND LEARNING ACTIVITY	ASSESSMENT TASKS
I	Public Health Aspects of Under-nutrition	Presentations, Discussion	Assignment on current nutrition concerns
II	Public Health Aspects of Life Style Related Disorders	Presentations, Discussion	Test on the topics
III	National / Public Sector Policies for Promotion of Nutrition and Health Status of the Population	Presentations, Discussion	Article review, current status of programmes and evaluation
IV	National / Public Sector Programmes for Promotion of Nutrition and Health Status of the Population	Presentations, Discussion	Critique of nutrition sensitive and specific programmes

**PRACTICAL**

**Marks : 50**

**Duration : 3 Hrs**

**Course Learning Outcomes:**

The students will:

1. Acquire skills to do critical appraisal of public health nutrition programmes.
2. Become familiar with methods of preparation and implementation of plans/ tools for evaluation of public health nutrition programmes.

**CONTENTS**

**PERIODS**

- Critical appraisal of ongoing national public health nutrition programmes. **4**
- Preparation of evaluation, monitoring and surveillance plans for public health nutrition programmes/ and their components – preparation of evaluation tools and their implementation. **8**

**Nutritional Epidemiology**

**Marks : 100**

**Duration : 3 hrs**

**Course Objectives:**

The purpose of this course is to enable the students to understand the principles of disease causation with emphasis on modifiable environmental factors including dietary factors. This will also help students appreciate the effect of quality measures of nutritional exposure and nutrition related health outcomes on determination of diet-disease relationship. This will encourage the application of epidemiology to prevention of disease and promotion of health through nutrition.

**Course Learning Outcomes:**

On completion of the course, students are expected to be able to –

1. Describe major study designs in nutritional epidemiology and select an appropriate design for addressing a study question.
2. Explain implication of study design and methods of diet and nutritional status assessment in interpreting studies in nutritional epidemiology
3. Explain the role of epidemiological research in improving health and nutritional status
4. Demonstrate knowledge of epidemiological approach to defining and measuring occurrence of nutrition and health related states in population
5. Demonstrate the knowledge of epidemiological approach to causation

**CONTENTS**

**PERIODS**

**Unit- 1 Basic epidemiology concepts and methods**

**17**

- Definition, scope and purpose of epidemiology
- Basic measurements in epidemiology
- Measurement of mortality, morbidity and disability – rates, ratios and proportions
- Comparison of disease occurrence- absolute and relative comparisons
- Epidemiologic study methods- observational and experimental studies
- Observational epidemiology- descriptive and analytical studies – ecological, cross sectional, case-control and cohort
- Experimental epidemiology- experimental and quasi experimental trials
- Randomized control trials, Field trials and community trials
- Population, sampling, sample size and power
- Introduction to nutritional epidemiology: Definition, scope and significance of nutritional epidemiology in public health nutrition.
- Design, steps in conducting the studies, data analysis and interpretation
- Association and causation in epidemiology
- Potential errors in epidemiologic studies
  - Measurement error and bias
  - Internal and external validity

**Unit -2 Epidemiologic approaches to diet-disease relationships**

**12**

- Measuring diet –disease associations- Type of measurement , time trends, correlation and regression, risk assessment
- Design of nutritional epidemiological studies
- Strengths and weaknesses of various designs in estimation of diet disease relationships, interpretation of epidemiologic research, multi variate relationship of diet and disease
- Genetics in nutritional epidemiology- genetic variation and epigenetics in nutritional epidemiology- Gene diet interactions.
- Ethical aspects of research in nutritional epidemiology

**Unit 3 Measurements of exposure and outcomes in Nutritional epidemiology**

**14**

- Nutritional exposures- Relevant direct and indirect measures of nutrition and health assessment
- Critical review of diet assessment methods- assessment of food consumption at different levels, measurement errors, strengths and limitations, reproducibility and validity of methods measuring food consumption of individuals- 24 dietary recall, diet record and

food frequency methods/Analysis of dietary patterns. Analysis and interpretation of dietary data.

- Nutritional status assessment: Critical review of anthropometric and various direct measures of nutritional status- clinical, biochemical, biophysical and measures of body composition. Sources of errors, strengths and limitations of various measures. Relevance and use of various indices and indicators of nutritional status for risk assessment.
- Biomarkers in nutritional epidemiology: Uses and limitations of biomarkers as measures of nutritional status and in dietary validation studies.
- Physical activity assessment and interpretation: Strength and weaknesses of subjective and objective methods.
- Ecological assessment of nutritional status, socio-economic, demographic, cultural and political factors.

#### **Unit-4 Role of Epidemiological research in development of nutrition related policies and their evaluation**

5

- Generating evidence for policy making, strengthening implementation of nutrition and health interventions and programmes, evaluation of the effectiveness of such interventions. Examples of use of epidemiological research data for improvement of nutrition and health interventions or national programmes.

#### **Suggested Readings:**

- Bonita, R., Beaglehole, R., Kjellström T. (2006) *Basic Epidemiology*, 2nd Edition, WHO, 2006 [http://whqlibdoc.who.int/publications/2006/9241547073\\_eng.pdf](http://whqlibdoc.who.int/publications/2006/9241547073_eng.pdf)
- Moon, G., Gould, M. (2000). *Epidemiology: An Introduction*. Philadelphia, Open University Press
- Langseth L. (1996). *Nutritional Epidemiology: Possibilities and Limitations*. Washington DC, ILSI Press.
- Gordis L. *Epidemiology*. 5th ed. Philadelphia, PA: Saunders Elsevier, 2013
- Aschengrau A., Seage G.R. (2014) *Essentials of Epidemiology in Public Health*. 3rd ed. Sudbury, MA: Jones & Bartlett.
- Willett, W. (2013) *Monographs in Epidemiology and Biostatistics*, Third Edition, Oxford University Press.
- Park, K. (2017) *Park's Textbook of Preventive and Social Medicine*, 24th ed. Jabalpur M/s. Banarsidas Bhanot
- Vir, S. (2011) *Public health nutrition in developing countries*, Woodhead Publishing India limited
- Gibney, M.J., Margetts, B.M., Kearney, J.M., Arab, L. (Eds) (2004) *Public Health Nutrition*. NS Blackwell Publishing
- Gibson, R. S. (2005). *Principles of Nutritional Assessment*. 2nd ed. Oxford University Press

#### **Teaching Plan:**

<b>Week 1</b>	Basic epidemiology concepts and methods
<b>Week 2</b>	Basic epidemiology concepts and methods
<b>Week 3</b>	Basic epidemiology concepts and methods
<b>Week 4</b>	Basic epidemiology concepts and methods
<b>Week 5</b>	Epidemiologic approaches to diet-disease relationships
<b>Week 6</b>	Epidemiologic approaches to diet-disease relationships
<b>Week 7</b>	Epidemiologic approaches to diet-disease relationships

- Week 8** Measurements of exposure and outcomes in Nutritional epidemiology  
**Week 9** Measurements of exposure and outcomes in Nutritional epidemiology  
**Week 10** Measurements of exposure and outcomes in Nutritional epidemiology  
**Week 11** Role of Epidemiological research in development of nutrition related policies and their evaluation  
**Week 12** Role of Epidemiological research in development of nutrition related policies and their evaluation

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
<b>1</b>	Understand major study designs in nutritional epidemiology and selection of an appropriate design for addressing a study question.	Presentations, Discussion	Test on the topic
<b>2</b>	Comprehend implication of study design and methods of diet and nutritional status assessment in interpreting studies in nutritional epidemiology	Presentations, Discussion	Review of related references
<b>3</b>	Explain the role of epidemiological research in improving health and nutritional status	Presentations, Discussion	Review and presentation of various examples
<b>4.</b>	Demonstrate knowledge of epidemiological approach to defining and measuring occurrence of nutrition and health related states in population	Presentations, Discussion	Test and Quiz
<b>5.</b>	Demonstrate the knowledge of epidemiological approach to causation	Presentations, Discussion	Review of articles

**PRACTICAL**

**Marks : 50**

**Duration : 3 Hrs**

**Course Objective:**

The course will enable students to critically review research articles specifically with emphasis on research design, sampling, analysis and interpretation of data. It will also

enhance their skills to perform secondary data analysis as well as to interpret and estimate errors in anthropometric data.

**Course Learning Outcomes:**

1. To acquire skills in critically reviewing original research paper and be able to perform secondary data analysis for documenting change in nutrition and health problems
2. To be able to determine reliability and validity of an assessment tools
3. To interpret and estimate errors in anthropometric data

**CONTENTS**

**PERIODS**

**Unit -1** Critically review original research on studies in the field of nutritional epidemiology and do the following:

- Identify research designs used, sampling, analyses and interpretation.
- Identify applications of research evidence in the field of public health nutrition

**Unit -2** Determine reliability and validity of an assessment tool

**Unit-3** Estimate measurement error in anthropometric data

- Interpret anthropometric data available from national and regional surveys

**Unit-4** Review and document the changes in nutrition and health problems in vulnerable groups of the population in the last decade using secondary data (Indicators of mortality, morbidity, disability and nutritional status).

**Suggested Readings:**

- Bonita, R., Beaglehole, R., Kjellström T. (2006) *Basic Epidemiology*, 2nd Edition, WHO, 2006 [http://whqlibdoc.who.int/publications/2006/9241547073\\_eng.pdf](http://whqlibdoc.who.int/publications/2006/9241547073_eng.pdf)
- Moon, G., Gould, M. (2000). *Epidemiology: An Introduction*. Philadelphia, Open University Press
- Langseth L. (1996). *Nutritional Epidemiology: Possibilities and Limitations*. Washington DC, ILSI Press.
- Gordis L. *Epidemiology*. 5th ed. Philadelphia, PA: Saunders Elsevier, 2013
- Aschengrau A., Seage G.R. (2014) *Essentials of Epidemiology in Public Health*. 3rd ed. Sudbury, MA: Jones & Bartlett.
- Willett, W. (2013) *Monographs in Epidemiology and Biostatistics*, Third Edition, Oxford University Press.
- Park, K. (2017) *Park's Textbook of Preventive and Social Medicine*, 24th ed. Jabalpur M/s. Banarsidas Bhanot
- Vir, S. (2011) *Public health nutrition in developing countries*, Woodhead Publishing India limited
- Gibney, M.J., Margetts, B.M., Kearney, J.M., Arab, L. (Eds) (2004) *Public Health Nutrition*. NS Blackwell Publishing
- Gibson, R. S. (2005). *Principles of Nutritional Assessment*. 2nd ed. Oxford University Press.

**NUTRITION COMMUNICATION FOR HEALTH PROMOTION**

**THEORY**

**Marks : 100**

**Duration : 3 Hrs**

### Course Objectives:

This course will enable students to understand the concept of Dietary guidelines and their relevance. They will understand the determinants of food behavior and will acquire skills to plan, implement and evaluate behaviour change communication for promotion of nutrition and health among vulnerable groups. The students will also learn about nutrition advocacy and ethical considerations in nutrition communication.

### Course Learning Outcomes

The students will:

1. Become Familiar with the concept of Dietary guidelines and their relevance.
2. Acquire skills to plan, implement and evaluate social and behaviour change communication for promotion of nutrition and health among the vulnerable groups.
3. Develop an understanding of the concept of nutrition advocacy.
4. Learn the ethics in nutrition and health communication.

### CONTENTS

### PERIODS

#### **Unit I Dietary guidelines for nutrition and health related concerns** **10**

- National and international guidelines and their role in nutrition promotion. Critical appraisal of the current guidelines.

#### **Unit II Nutrition and behaviour inter-relationship**

- Food and health behaviour, models/ theories of health behaviour, food choices, strategies for intervention at the ecological and individual level

#### **Unit III Social and Behaviour Change Communication for nutrition and health promotion** **20**

- Concept and objectives of communication for behaviour change
- Planning of communication strategies for social and behaviour change programme,
- Communication needs analysis, stakeholders in nutrition promotion, developing nutrition education plan, identifying communication strategies/ approaches for nutrition and health promotion (e.g. social marketing), designing nutrition and health messages, selecting communication channels, developing and field testing of communication materials, designing training strategies for trainers and their capacity building.
- Implementing social and behaviour change communication intervention: an overview
- Evaluation of social and behaviour change communication programmes

#### **Unit IV Nutrition Advocacy** **8**

- Meaning, types, tools and techniques and advocacy planning.
- Role of advocacy in nutrition policy formulation, preparation of policy briefs.

#### **Unit V Ethics in nutrition and health communication** **2**

- Significance of ethics in nutrition and health communication
- Ethical Principles and concerns

### Suggested Readings:

- Gibney M.J., Margetts, B.M., Kearney, J.M., Arab, L. (Eds) (2004) *Public Health Nutrition*.NS Blackwell Publishing.
- Prochaska, K.L., *The Transtheoretical Model of Behavioural Change*, Shumaker SA(Eds).

- Robert C. Hornik , (2002) *Public Health Communication: Evidence for Behaviour Change*, Lawrence Erlbaum Associates, Inc.
- Ray E.B. and Donohew L. (1990) *Communication and Health: Systems and Applications*. Lawrence Erlbaum Associates, Inc.
- Maibach E. and Parrott R.L. (1995) *Designing health messages: Approaches from Communication Theory and Public Health Practice*. Sage Publications, Inc.
- Boyle M.A. (2016). *Community Nutrition in Action: An Entrepreneurial Approach*. 7th Edition. Brooks Cole.
- Vir S.C. (Ed). (2012) *Nutrition-Health education and communication for improving women and child nutrition. Public Health and Nutrition in Developing Countries (Part II)*. Woodhead Publishing India Pvt. Ltd.
- USAID. *Effective At-Scale Nutrition Social and Behavior Change Communication*. Multi-Sectoral Nutrition Strategy 2014–2025 Technical Guidance Brief.
- McNulty J. (2013) *Challenges and issues in nutrition education*. Rome: Nutrition Education and Consumer Awareness Group, Food and Agriculture Organization of the United Nations. Available at: [www.fao.org/ag/humannutrition/nutritioneducation/en/](http://www.fao.org/ag/humannutrition/nutritioneducation/en/)
- USAID (2010) *Behavior Change Communication (BCC)*. Learning Resource Package. Facilitator's Guide.
- O'Sullivan, G.A., Yonkler, J.A., Morgan, W., and Merritt, A.P. (2003) *A Field Guide to Designing a Health Communication Strategy*, Baltimore, MD: Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, March 2003.

### **Teaching Plan:**

Week 1: National and international guidelines and their role in nutrition promotion.

Week 2: National and international guidelines and their role in nutrition promotion.

Critical appraisal of the current guidelines

Week 3: Critical appraisal of the current guidelines

Food and health behaviour, models/ theories of health behaviour, food choices,

Week 4: Food and health behaviour, models/ theories of health behaviour, food choices,

Strategies for intervention at the ecological and individual level

Week 5: Concept and objectives of communication for behaviour change

Planning of communication strategies for social and behaviour change programme,

Week 6: Communication needs analysis, stakeholders in nutrition promotion, developing nutrition education plan, identifying communication strategies/ approaches for nutrition and health promotion (e.g. social marketing),

Week 7: Communication needs analysis, stakeholders in nutrition promotion, developing nutrition education plan, identifying communication strategies/ approaches for nutrition and health promotion (e.g. social marketing),

Week 8: Designing nutrition and health messages, selecting communication channels, developing and field testing of communication materials, designing training strategies for trainers and their capacity building.

Week 9: Implementing social and behaviour change communication intervention: an overview

Evaluation of social and behaviour change communication programmes

Week 10 : Meaning, types, tools and techniques, Advocacy planning.

Week 11: Role of advocacy in nutrition policy formulation, preparation of policy briefs

Week 12: Significance of ethics in nutrition and health communication , Ethical Principles and concerns

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
<b>1</b>	Become Familiar with the concept of Dietary guidelines and their relevance.	Presentations, Discussion	Test on the topic
<b>2</b>	Acquire skills to plan, implement and evaluate behaviour change communication for promotion of nutrition and health among the vulnerable groups.	Presentations, Discussion	Review of related references
<b>3</b>	Develop an understanding of the concept of nutrition advocacy.	Presentations, Discussion	Review and presentation of various examples
<b>4</b>	Learn the ethics in nutrition and health communication.	Discussion	Assignments

**PRACTICAL**

**Marks : 50**

**Duration : 3 hrs**

**Course Learning Outcomes:**

The students will:

1. Comprehend communication strategies being used for public health and nutrition programmes in the community.
2. Acquire skills to design a communication strategy for addressing a public health nutrition problem in the community.

**CONTENTS**

**PERIODS**

- Planning of communication strategies for public health nutrition problems among vulnerable groups in the community -field testing of messages, materials and methods. 10
- Review of communication strategies being used in any one public health nutrition programme in the community. 2

**Suggested Readings:**

- Robert C. Hornik , (2002) *Public Health Communication: Evidence for Behaviour Change*, Lawrence Erlbaum Associates, Inc.
- Ray E.B. and Donohew L. (1990) *Communication and Health: Systems and Applications*. Lawrence Erlbaum Associates, Inc.

- Maibach E. and Parrott R.L. (1995) *Designing health messages: Approaches from Communication Theory and Public Health Practice*. Sage Publications, Inc.
- Boyle M.A. (2016). *Community Nutrition in Action: An Entrepreneurial Approach*. 7th Edition. Brooks Cole.
- Vir S.C. (Ed). (2012) *Nutrition-Health education and communication for improving women and child nutrition. Public Health and Nutrition in Developing Countries (Part II)*. Woodhead Publishing India Pvt. Ltd.
- USAID. *Effective At-Scale Nutrition Social and Behavior Change Communication*. Multi-Sectoral Nutrition Strategy 2014–2025 Technical Guidance Brief.
- McNulty J. (2013) *Challenges and issues in nutrition education*. Rome: Nutrition Education and Consumer Awareness Group, Food and Agriculture Organization of the United Nations. Available at: [www.fao.org/ag/humannutrition/nutritioneducation/en/](http://www.fao.org/ag/humannutrition/nutritioneducation/en/)
- USAID (2010) *Behavior Change Communication (BCC)*. Learning Resource Package. Facilitator's Guide.
- O'Sullivan, G.A., Yonkler, J.A., Morgan, W., and Merritt, A.P. (2003) *A Field Guide to Designing a Health Communication Strategy*, Baltimore, MD: Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs, March 2003.

## FOOD PROCESSING TECHNOLOGY -II

**Marks: 100**

**Duration: 3 hours**

**Course Objectives:** The course aims to provide knowledge of principles and technical aspects of processing of milk and milk products and fruits and vegetable preservation.

**Course Learning Outcomes:** Students will be able to-

1. Understand various aspects of processing and quality of milk and milk products.
2. Ingrain the understanding of post-harvest management of fruits and vegetables.
3. Gain in depth knowledge about processing and preservation techniques and quality aspects of fruits and vegetable.

### CONTENTS

### PERIODS

#### Unit I: Milk and milk products

23

- **Introduction to market milk:** Indian standards, Composition, factors affecting composition of milk, physico-chemical properties of milk and its constituents.
- **Milk processing:** Clean milk practices, buying and collection, platform tests, pre-heating, filtration, clarification, standardization, bactofugation, homogenization, pasteurization, cooling, packaging and storage. Cleaning and sanitization of dairy equipment including CIP and COP.
- **Milk products (Cream, butter, ice cream, curd, cheese, khoa and ghee)-**Introduction, definition, classification, methods of manufacture, quality aspects.

#### Unit II: Introduction to Fruits and Vegetables

10

- **Classification** of fruits and vegetables, general composition, enzymatic browning and its prevention.
- **Post-harvest changes and management of fruits and vegetables-** Climacteric rise, horticultural maturity, physiological maturity, maturity indices and process of ripening-physiological changes, physical and chemical changes. Causes of post-harvest losses, farm heat, measures to reduce post –harvest losses in F & V, Controlled atmosphere storage, zero energy cool chambers.

#### Unit III: Preservation of fruits and vegetables

10

- **Canning:** Selection of fruits and vegetables, process of canning, factors affecting the process- time and temperature, containers of packing, lacquering, syrups and brines for canning, spoilage in canned foods.
- **Fruit Beverages:** Introduction, Processing of fruit juices (selection, juice extraction, deaeration, straining, filtration and clarification), preservation of fruit juices (pasteurization, chemically preserved with sugars, freezing, drying, tetra-packing, carbonation), processing of squashes.
- **Jams, jellies and marmalades:** Introduction, Jam: Constituents, selection of fruits, processing & technology, Jelly: Essential constituents (Role of pectin, ratio), Theory of jelly formation and defects in jelly.
- **Pickles, chutneys and sauces:** Processing, Types, role of ingredients, causes of spoilage in pickling.
- **Tomato products:** Selection of tomatoes, pulping & processing of tomato juice, tomato puree, paste, ketchup, sauce and soup.

#### Suggested Readings:

- Siddapa, GS (1986) *Preservation of Fruits and Vegetables*, ICAR Publication
- Van Loesecke HW (1998) *Food Technology Series Drying and Dehydration of foods*. Allie Scientific Publishers
- Salikhe D K and Kadam SS (1995) *Handbook of fruit science and technology. Production Composition, Storage and processing*. Marcel Decker inc, New York
- Marriott N G (1985) *Principles of Food Sanitation* 1<sup>st</sup> Edition. A VI publication USA.
- De SK (2001) *Outlines of Dairy Technology*, Oxford University Press, New Delhi.

**Teaching Plan:**

**Week 1:** Introduction to market milk-Indian standards, Composition, factors affecting composition of milk, Physico-chemical properties of milk and its constituents

**Week 2:** Milk processing: Clean milk practices, buying and collection, platform tests, pre-heating, filtration, clarification, standardization

**Week 3:** Bactofugation, homogenization, pasteurization, cooling, packaging and storage. Cleaning and sanitization of dairy equipment including CIP and COP

**Week 4:** Milk products (Cream, butter, ice cream, curd)-Introduction, definition, classification, methods of manufacture, quality aspects.

**Week 5:** Cheese, khoa and ghee- Introduction, definition, classification, methods of manufacture, quality aspects.

**Week 6:** Classification of fruits and vegetables, general composition, enzymatic browning and its prevention

**Week 7:** Post-harvest changes and management of fruits and vegetables- Climacteric rise, horticultural maturity, physiological maturity, maturity indices and process of ripening-physiological changes, physical and chemical changes.

**Week 8:** Canning: Selection of fruits and vegetables, process of canning, factors affecting the process- time and temperature, containers of packing, lacquering, syrups and brines for canning, spoilage in canned foods.

**Week 9:** Causes of post-harvest losses, farm heat, measures to reduce post –harvest losses in F & V, Controlled atmosphere storage, zero energy cool chambers.

**Week 10:** Fruit Beverages: Introduction, Processing of fruit juices (selection, juice extraction, deaeration, straining, filtration and clarification), preservation of fruit juices (pasteurization, chemically preserved with sugars, freezing, drying, tetra-packing, carbonation), processing of squashes.

**Week 11:** Jams, jellies and marmalades: Introduction, Jam: Constituents, selection of fruits, processing & technology. Jelly: Essential constituents (Role of pectin, ratio), Theory of jelly formation and defects in jelly.

**Week 12:** Pickles, chutneys and sauces: Processing, Types, role of ingredients, causes of spoilage. Tomato products: Selection of tomatoes, pulping & processing of tomato juice, Tomato puree, paste, ketchup, sauce and soup

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Introduction to market milk and processing of	Lectures, discussions and	<ul style="list-style-type: none"><li>• Assignment on milk</li><li>• Visit report</li></ul>

	milk products	visit to milk industry	
2.	Introduction to fruits and vegetables and post-harvest management	Lectures, discussions based on industrial uses/processing of fruits and vegetables	<ul style="list-style-type: none"> <li>• Presentation/quiz on fruits and vegetables</li> <li>• Practicals on quality aspects of fruits and vegetables.</li> </ul>
3.	Learning techniques of preservation of fruits and vegetables	Lectures, discussions	<ul style="list-style-type: none"> <li>• Presentation</li> <li>• Practicals</li> </ul>

**PRACTICAL**

**Marks: 50**

**Duration: 3 hours**

**Course objective:** The course aims at providing knowledge of processing and preservation principles and techniques pertaining to milk & milk products and fruits & vegetables.

**Course learning outcomes:**

Students will be able to-

1. Understand technologies used for processing and preservation of milk and milk products and preservation of fruits & vegetable products.
2. Gain practical knowledge of analysing adulterants in milk and quality aspects of milk, milk products and fruits and vegetables.

**CONTENTS**

**PERIODS**

**Unit I: Milk and milk products**

**5**

- Quality analysis of milk and determination of its components like fat, SNF, protein, TSS.
- Detection of preservatives in milk (e.g. boric acid and borate).
- Detection of adulterants in milk (like starch, sugar, soda, detergent, urea).
- Analysis of cream, cheese, paneer, khoa as per BIS standards.
- Visit to milk industry to understand process of pasteurization and homogenization.

**Unit II: Fruits and Vegetable processing**

- Experiment on control of enzyme activity, enzyme inactivation in fruits and vegetables.
- Estimation of acidity, total solids of different foods – Squashes, syrups and juices.
- Dehydration of fruits and vegetables and its effect on color texture and rehydration ratio.
- New product development using principles of preservation of fruits and vegetables by low temperature/heat/salt and sugar
- Processing of tomato products (ketchup and sauce).
- Processing of jams, jellies and marmalades.
- Processing of pickles and brines

**Suggested Readings:**

- Siddapa, G S (1986) *Preservation of Fruits and Vegetables*, ICAR Publication
- Van Loesecke HW (1998) *Food Technology Series Drying and Dehydration of foods*. Allie Scientific Publishers
- Salikhe D K and Kadam S S (1995) *Handbook of fruit science and technology. Production Composition, Storage and processing*. Marcel Decker inc, New York

- Marriott N G (1985) *Principles of Food Sanitation* 1<sup>st</sup> Edition. A VI publication USA.
- De SK (2001) *Outlines of Dairy Technology*, Oxford University Press, New Delhi

## ADVANCED FOOD SCIENCE THEORY

**Marks: 100**

**Duration: 3hours**

**Course objective:** The course aims to enable students to acquaint with fundamentals of food processing technology and its process and to understand concepts of various engineering principles and processing methods.

### **Course Learning Outcomes:**

Students will be able to-

1. Gain knowledge of principles of Unit operations involved in food processing industry.
2. Learn fundamentals of food processing technology and its process.
3. Understand concepts of various engineering principles and processing and preservation methods and their application.
4. Understand various post processing operations important from industrial point of view.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Processing and preservation by heat**

18

- Principle, theory and effect of blanching, pasteurization, sterilization, UHT, canning, extrusion cooking and frying on food.

#### **UNIT II: Processing and preservation by low temperature**

18

- Principle, theory and effect of refrigeration, chilling, freezing, freeze-drying (lyophilization) and freeze-concentration on food.

#### **UNIT III: Processing and preservation by non-thermal technologies**

6

- Principle, theory and effect of irradiation, high pressure, pulsed electric field and other innovative technologies on food

#### **UNIT IV: Processing and preservation by other methods**

6

- Principle, theory and effect on food of drying, osmotic dehydration, concentration, evaporation and distillation, Hurdle technology.

### **Suggested Readings:**

- Branan AL, Davidson PM & Salminen S. (2001) *Food Additives*. 2nd Ed. Marcel Dekker.
- Fellows P J (2002) *Food Processing Technology- Principles and Practices*, 2<sup>nd</sup> Edition. Woodhead Publishing Ltd.
- Food and Agriculture Organization (1980) *Manual of Food Quality Control, Additive Contaminants Techniques*. Rome.
- Fuller, G.W. (1999) *New Food Product Development. From concept to market place*. CRC press, New York.
- Mahindru, S N (2000) *Food Additives- Characteristics Detection and Estimation*. Tata Mc Graw Hill Publishing Co. Ltd.

**Teaching Plan:**

**Week 1:** Principle, theory and effect on food of blanching and pasteurization.

**Week 2:** Principle, theory and effect on food of sterilization, UHT and canning

**Week 3:** Principle, theory and effect on food of extrusion cooking and frying

**Week 4:** Principle, theory and effect on food of refrigeration and chilling

**Week 5:** Principle, theory and effect on food of freezing and freeze-drying (lyophilization)

**Week 6:** Principle, theory and effect on food of freeze-concentration

**Week 7:** Principle, theory and effect on food of irradiation and high pressure

**Week 8:** Principle, theory and effect on food of pulsed electric field and other innovative technologies.

**Week 9:** Principle, theory and effect on food of drying

**Week 10:** Principle, theory and effect on food of concentration and evaporation

**Week 11:** Revision

**Week 12:** Presentations

**Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	The course intends to provide knowledge of principles of Unit operations involved in food processing industry.	Lectures, discussions and visit	<ul style="list-style-type: none"> <li>• Assignment</li> <li>• Visit report</li> </ul>
2.	Students will learn fundamentals of food processing technology and its process.	Lectures, discussions	<ul style="list-style-type: none"> <li>• Presentation/quiz</li> <li>• Practicals.</li> </ul>
3.	The course will train students to understand concepts of various engineering principles and processing and preservation methods and their application.	Lectures, discussions	<ul style="list-style-type: none"> <li>• Presentation</li> <li>• Practicals</li> </ul>
4.	To understand various post processing operations important from industrial point of view.	Lectures, discussions	<ul style="list-style-type: none"> <li>• Presentation</li> <li>• Practicals</li> </ul>

**PRACTICAL**

**Marks: 50**

**Duration:3 hours**

**Course Objective:** The course enables students to apply knowledge in application of various engineering principles and analysis of food.

**Course Learning Outcomes:**

Students will be able to-

1. Understand quantitative analysis of food constituents and trace elements
2. Perform food analysis using advanced techniques.

### **CONTENTS**

### **PERIODS**

- Visit to food processing industry to learn about heat exchangers, freezers, freeze drying and freeze concentration.
- Determination of drying characteristics
- Freezing time calculations.
- To conduct dehydration and rehydration of fruits and vegetables.
- To study the steps of can making process.
- Estimation of ascorbic acid and effect of heat treatment on it.
- Estimation of total acidity, volatile acidity, fixed acidity and esters in alcoholic beverages.
- Analysis of water for its potability. Estimation of Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) of industry waste water
- Estimation of toxins and pesticide residue in foods.

### **Suggested Readings:**

- Girdharilal S, G.S and Tandon, G.L. (1998) *Preservation of fruits & Vegetables*, ICAR, New Delhi
- Cruse WB (2004) *Commercial Unit and Vegetable Products*, W.V. Special Indian Edition, Pub: Agrobios India
- Ranganna S. (1986) *Handbook of analysis and quality control for fruits and vegetable products*, Tata Mc Graw-Hill publishing company limited, 2nd edition.
- Srivastava R.P. and Kumar S. (2006) *Fruits and Vegetables Preservation- Principles and Practices*. 3<sup>rd</sup> Ed. International Book Distributing Co.
- Potter NH (1998) *Food Science*, CBS Publication, New Delhi.
- Ramaswamy H and Marcotte M. (2003) *Food Processing Principles and Applications* CRC Press.
- Coles R, McDowell D and Kirwan MJ (2003) *Food Packaging Technology*, CRC Press.
- Deman JM (1990) *Principles of Food Chemistry*, 2<sup>nd</sup> ed. Van Nostrand Reinhold, NY.

## **APPLIED FOOD MICROBIOLOGY**

### **THEORY**

**Marks: 100**

**Duration: 3 hours**

**Course Objective:** The course aims to provide knowledge of the microbial flora associated with food, role of microorganisms, microbiological safety of food, food borne pathogens and their toxins.

### **Course Learning outcomes:**

Students will be able to-

1. Understand the microbial flora associated with food and acquire knowledge on beneficial role of microorganism and relevance of microbiological safety of food.
2. Understand the conventional and rapid methods for detection of food borne pathogens and their toxins.
3. Understand the role of microbes in waste water treatment.

CONTENTS	PERIODS
<b>UNIT I: Microorganisms associated with Foods</b>	2
<ul style="list-style-type: none"><li>• Bacteria, Fungi, Yeasts and Viruses.</li></ul>	
<b>UNIT II: Useful Microorganisms</b>	10
<ul style="list-style-type: none"><li>• Food Cultures, Fermentation, Fermented products and role of microorganisms.</li><li>• Cultivation of microorganisms: Fermenter design and various types of fermentation systems (submerged, surface and solid state); Fermentation substrates, Principles and production of enzymes, Baker's yeast, vinegar.</li></ul>	
<b>UNIT II: Food microbiological quality and safety</b>	18
<ul style="list-style-type: none"><li>• Estimating number of microorganisms.</li><li>• ICMSF criteria for microbiological safety of food-Microbiological standards, Microbiological guidelines, Microbiological specifications. Microbiological criteria for various food products.</li><li>• ICMSF sampling plan: Two class plan, Three class plan.</li><li>• Repair and detection of micro organisms</li><li>• Colony counting methods</li><li>• Indicators of food quality and food safety-<i>Coliforms, Enterococci, Bifidobacteria</i>, coliphages.</li><li>• Psychrotrophic , Thermotolerant, Lipolytic, Proteolytic, Halophilic, Osmophilic, Pectinolytic, Acid producing microorganisms: Introduction, general consideration, treatment of sample, equipment, materials, procedure and interpretation.</li><li>• Predictive microbiology</li></ul>	
<b>UNIT III: Techniques for detection of pathogens associated with food</b>	12
<ul style="list-style-type: none"><li>• Analysis of food for detection of <i>Salmonella</i> and <i>E.coli</i>.</li><li>• Rapid methods for detection of food borne pathogens and their toxins: ATP Photometry, Direct epifluorescent filter technique, Immunological Methods (Immunodiffusion, ELISA), Molecular method (PCR based).</li></ul>	
<b>UNIT IV: Waste disposal and Effluent treatment</b>	6
<ul style="list-style-type: none"><li>• Identification of waste, Utilization and disposal of industrial wastes.</li><li>• Different methods of waste disposal.</li><li>• Contemporary technologies for management of waste</li></ul>	

**Suggested Readings:**

- Banwart GJ. (1987) *Basic Food Microbiology* . CBS Publishers and Distributors.
- Frazier WC, Westoff DC. (1998). *Food Microbiology*. 4<sup>th</sup> ed. Tata McGraw-Hill Publishing Co. Ltd.
- Garbutt J. (1997). *Essentials of Food Microbiology*. Arnold London.
- Jay JM, Loessner DA, Martin J. (2005) *Modern Food Microbiology*. 7<sup>th</sup> ed. Springer
- Speck, Marvin, (1984). Compendium of Methods for Microbiological examination of Foods. American Public Health Association
- Harry W. Seeley, Paul J. VanDemark (1962). *Microbes in action*.

### Teaching Plan

**Week 1:** Microorganisms associated with Foods, Useful Microorganisms.

**Week 2:** Useful Microorganisms

**Week 3:** Useful Microorganisms

**Week 4:** Food microbiological quality and safety

**Week 5:** Food microbiological quality and safety

**Week 6:** Food microbiological quality and safety

**Week 7:** Food microbiological quality and safety

**Week 8:** Food microbiological quality and safety

**Week 9:** Techniques for detection of pathogens associated with food

**Week 10:** Techniques for detection of pathogens associated with food

**Week 11:** Techniques for detection of pathogens associated with food

**Week 12:** Waste disposal and Effluent treatment

### Facilitating the achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the microbial flora associated with food.	Lectures, discussions	<ul style="list-style-type: none"><li>• Assignment</li><li>•</li></ul>
2.	Acquire knowledge on beneficial role of microorganism.	Lectures, discussions	<ul style="list-style-type: none"><li>• Presentation/quiz</li><li>• Practicals.</li></ul>
3.	Understand the relevance of microbiological safety of food.	Lectures, discussions	<ul style="list-style-type: none"><li>• Presentation</li><li>• Practicals</li></ul>
4.	Understand the conventional and rapid methods for detection of food borne pathogens and their toxins	Lectures, discussions	<ul style="list-style-type: none"><li>• Presentation</li><li>• Practicals</li></ul>
5.	Understand the role of microbes in waste water treatment	Lectures, discussions and visit	<ul style="list-style-type: none"><li>• Presentation</li><li>• Practicals</li><li>• Visit report</li></ul>

### PRACTICAL

**Marks: 50**

**Duration: 3 hours**

**Course objectives:** The course aims at providing practical understanding of cultivation of microorganisms and study of microorganisms commonly associated with foods and environmental monitoring of a food manufacturing unit.

### Course learning outcomes:

Students will be able to-

1. Learn techniques of detection of microorganisms from food samples.
2. Understand the method of enumeration of microorganisms and to study different types of microorganisms.

**CONTENTS**

**PERIODS**

**UNIT I: Microbial growth**

**3**

- To study bacterial growth by Turbidometric method.
- To study the effect of pH and temperature on bacterial growth.
- To grow Brewer's Yeast and its Application in alcohol production.

**UNIT II: Detection and enumerate of microorganisms associated with food samples.**

**8**

- Psychrotrophic, Thermotrophic, Lipolytic, Proteolytic, Halophilic, Osmophilic, Pectinolytic, Acid producing microorganisms from different food samples.

**UNIT III: Environmental monitoring and personnel hygiene (College canteen/Any manufacturing unit)**

**3**

- Use of swabs, Contact plate, Dip slide, Exposure plate and Phenol co-efficient determination.

**Suggested Readings:**

- Banwart GJ. (1987) *Basic Food Microbiology*. CBS Publishers and Distributors.
- Frazier WC, Westoff DC. (1998). *Food Microbiology*. 4<sup>th</sup> ed. Tata McGraw-Hill Publishing Co. Ltd.
- Garbutt J. (1997). *Essentials of Food Microbiology*. Arnold London.
- Jay JM, Loessner DA, Martin J. (2005) *Modern Food Microbiology*. 7<sup>th</sup> ed. Springer
- Speck, Marvin, (1984). *Compendium of Methods for Microbiological examination of Foods*. American Public Health Association
- Harry W. Seeley, Paul J. VanDemark (1962). *Microbes in action*.

**M.Sc. Human Development and Childhood Studies**

**Department of Home Science**

**Lady Irwin College**

**University of Delhi**

**Course Credit Structure-CBCS**

**2018**

## Overview:

Established in 1970, the Department came into being as the Department of Child Development. Over the decades, while retaining this niche expertise, it evolved and broadened its focus to encompass the entire life span hence the name Human Development and Childhood Studies.

The Department has been committed to providing a coherent framework for learning across the curriculum as well as encouraging faculty to retain unique teaching styles and interests. Classroom instruction, professional organisational linkages, community service, and supervised field experiences provide the knowledge and skills necessary for careers in Human Development. Extensive - and meaningful - use of IT provides students with a contemporary educational experience.

## Features:

Some of the unique features of the Department are:

### **Develops a multi-faceted understanding of human development-**

The varied domains of human development are both distinct and inter-related. Nature - in the form of our genetic make-up - does affect what we are. However, what we become is determined as much by the socio-economic, cultural, historical and educational, as well as our own volition and agency. Human beings shape the context for self and others, while also being shaped by it. Our courses explore these aspects in depth and enable a dynamic and forward-looking understanding that helps our students interpret their past and impact their futures.

**Combines theory, practice and research-** Theoretical perspectives that illustrate developmental patterns, appropriate methods of research inquiry along with practical work with children and families form the major constituents of the course.

**Takes a multi-disciplinary approach and responds to emerging social trends-** The description of social, cultural, economic and psychological dimensions educate students of the ideal and real influences on the lives of growing children. The changes in several social configurations have had an impact on the course content and resulted in revisions that take cognizance of plurality in workspaces, new forms of gender images, a growing understanding of relevance of the rights approach to social policy and legislation and the special place of the child in the 21st century. The course also provides changing and progressive growth of legal

and economic provisions as well as support for children and youth by GO and NGO efforts.

**Has its own Child Study Centre-** Apart from academic excellence, the Department reaches out to the community through programmes such as the Rajkumari Amrit Kaur Child Study Centre, a counselling cell and an early intervention centre. The Rajkumari Amrit Kaur Child Study Centre a laboratory school has been an integral part of the Department, providing regular hands-on experiences to the students as well as making quality services including early intervention, available to young children and their families. It also acts a space for providing supervision to ECCE trainees from other educational institutions such as IGNOU and Mobile Crèches.

**Prepares students for research and people-oriented careers-** At the Masters level each student undertakes an empirical study under the supervision of the department faculty independently. This provides the experience of planning and carrying out research. Students also master the various aspects of developing print and audio-visual material for varied audiences across the lifespan. These fulfill needs that range from advocacy to education to entertainment. Organisational placements and internships are a compulsory component of the coursework. It prepares students for careers that focus on helping individuals, families and organisations in tackling developmental challenges and life-cycle issues. The multi-disciplinary curriculum draws upon the disciplines of Sociology, Psychology, Anthropology and Education. With people as our subject, learning is enhanced by the application of theory to real world issues.

### **Contributions to Contemporary India:**

The Department furthers policy and practice in human development, with an emphasis on addressing children's development, by:

- Preparing professionals with cultural rootedness and competence to deal with contemporary concerns
- Undertaking qualitative and quantitative research to deepen the academic understanding of people, contexts, and development
- Providing academic resource to the social and educational sector " governmental or non-governmental initiatives, and contributing to movements for social justice and human rights
- Applying academic research to support industry/economy /business

**Vision:**

Multi-disciplinary department devoted to understanding the nature of human development across the life span in a culturally diverse, changing and complex world.

**Mission:**

Human Development and Childhood Studies is a multidisciplinary department devoted to understanding the nature of human development across the lifespan in a culturally diverse, changing and complex world. Our endeavour is to apply contextual and systemic frameworks to the study of development and relationship processes through research, teaching and application.

**Programme Objectives:**

The programme structure and environment encourages research, scholarship and outreach opportunities to contribute to the field. The various courses offered in the Department enable students to:

- Study the domains of human development from the life span perspective
- Examine the interaction between the child and the socio-cultural systems, including educational settings
- Promote competence in scientific study, research in the field, and the use of relevant assessment measures for children
- Develop sensitivity and skills in working with children and families
- Acquire working knowledge in counselling children and families
- Plan and implement programmes for children
- Create awareness about children and families living in difficult circumstances
- Provide students with a situated career exposure through internships and placements.

**Program Outcomes:**

The Department of Human Development and Childhood Studies focuses on contextual and systemic frameworks to the study of development and relationship processes through research, teaching and application. The Department engages students in a curriculum that values and supports interdisciplinary perspectives and combines classroom learning with field opportunities. There is a special emphasis on the study of heterogeneity among children and

adults in varied settings. The Department tracks attainments of students who undertake a specialization in HDCS after their graduation to gauge the program outcomes. The Department also supports the work these alumnae are involved in by extending faculty expertise and academic resources to them. Program specific outcomes are also tracked as we classify the nature of studies/work the alumnae are engaged in. There is sustained interaction with Ph.D. scholars, organizing seminars, and involving them in classroom transactions specific to their areas of research interests.

- Students get trained in planning, implementation, monitoring and evaluation of extension activities during field visits and projects.
- Students develop skills in outreach consultancies in the fields of: ECCE training, Inclusive Education, Elementary Education, Theatre in Education, and Media.
- Support and advocacy skills for Gender Justice, Child Rights, Inclusion and Adoption help students to gain professional advantage.
- Students are enabled to critique, propose and formulate research design strategies.
- Student will engage with the diversity and plurality of childhood in India and gain knowledge of the status of children in India.
- Student will acquire skills to critically analyze the concerns related to specific groups and will understand the processes and principles of 'rights based programming'.
- Student will acquire a repertoire of skills for working with children and relevant adults in different contexts and will be familiar with selected standardised tests/protocols for the study including assessment of individuals, families/settings.
- The students will learn strategies for effective capacity building, implementation and assessment of early childhood education and development programmes.
- Student will examine and analyse the significance of children's social and ecological contexts, study the approaches and practices for inclusion and empowerment of children and families.
- The student will develop a holistic understanding of the educational ecosystem, processes and practices with reference to human development.
- The students are oriented to the linkages between social policy, legislations and implementation of schemes and programmes.

## COURSE CREDIT SCHEME

Semester	Core Courses			Elective Course			Open Elective Course			Total Credits
	No. of papers	Credits (L+T/P)	Total Credits	No. of papers	Credits (L+T/P)	Total Credits	No. of papers	Credits (L+T/P)	Total Credits	
I	4	16L+6 T/P	22							22
II	5	16L+8 T/P	24				1	2	2	26
III	5	8L+ 8P	16	2	8L + 4 P	12				28
IV	1	4	4	3	12L + 6	18				22
<b>Total Credits for the Course</b>			<b>66</b>			<b>30</b>			<b>2</b>	<b>98</b>

<b>SEMESTER I</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
<b>Course</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
<b>HDCSCC 1</b> RESEARCH METHODS	4		1	5
<b>HDCSCC 2</b> EARLY CHILDHOOD CARE AND EDUCATION	4	2		6
<b>HDCSCC 3</b> DEVELOPMENT IN CHILDHOOD	4	2		6
<b>HDCSCC 4</b> THEORIES OF HUMAN DEVELOPMENT	4		1	5
<b>Total credits in core course</b>	22			

<b>SEMESTER II</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
<b>Courses</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
<b>HDCSCC 5</b> STATISTICS AND COMPUTER APPLICATIONS	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSCC 6</b> DIVERSITY, DISADVANTAGE AND EQUITY	<b>4</b>			<b>4</b>
<b>HDCSCC 7</b> DEVELOPMENT IN ADOLESCENCE AND YOUTH	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSCC 8</b> LAW, POLICY AND PROGRAMS FOR WOMEN AND CHILDREN	<b>4</b>			<b>4</b>
<b>HDCSCC 9 Integrated practical</b> ASSESSMENT AND EVALUTAION IN HUMAN DEVELOPMENT		<b>4</b>		<b>4</b>
<b>HDCSOE</b> PARENTING AND HIGH RISK INFANTS	<b>2</b>			<b>2</b>
<b>TOTAL NUMBER OF CREDITS</b>	<b>26</b>			

<b>SEMESTER III</b>				
<b>Number of core/elective courses</b>	<b>Credits in each core/elective course</b>			
<b>Courses</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
<b>HDCSCC 10</b> EDUCATION FOR HUMAN DEVELOPMENT	<b>4</b>			<b>4</b>
<b>HDCSCC 11</b> DEVELOPMENTAL DISABILITIES	<b>4</b>			<b>4</b>
<b>HDCSCC 12 Integrated practical</b> DEVELOPMENTAL DISABILITIES		<b>4</b>		<b>4</b>
<b>HDCSCC 13</b> Internship		<b>2</b>		<b>2</b>
<b>HDCSCC 14</b> Dissertation (seminar)		<b>2</b>		<b>2</b>
<b>HDCSEC 1 &amp; 1 (B)</b> <ul style="list-style-type: none"> <li>• WOMEN AND GENDER STUDIES</li> <li>• PARENTING AND EARLY INTERVENTION</li> </ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSEC 2 &amp; 2 (B)</b> <ul style="list-style-type: none"> <li>• SOCIOLOGY OF CHILDHOOD</li> <li>• CHILDHOOD AND ADOLESCENCE ACROSS ECOLOGICAL SETTINGS</li> </ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>TOTAL NUMBER OF CREDITS</b>	<b>28</b>			

<b>SEMESTER IV</b>				
<b>Number of core/elective courses</b>	<b>Credits in each core/elective course</b>			
<b>Courses</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
<b>HDCSCC 15</b> Dissertation/Experiential Learning Project		<b>4</b>		<b>4</b>
<b>HDCSEC 3 &amp; 3 (B)</b> <ul style="list-style-type: none"> <li>• SOCIAL PSYCHOLOGY FOR HUMAN DEVELOPMENT</li> <li>• DEVELOPMENT IN ADULTHOOD</li> </ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSEC 4 &amp; 4 (B)</b> <ul style="list-style-type: none"> <li>• ORGANISATION AND MANAGEMENT OF PROGRAMMES FOR CHILDREN</li> <li>• CHILDREN AND MEDIA</li> </ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSEC 5 &amp; 5 (B)</b> <ul style="list-style-type: none"> <li>• CHILD AND ADOLESCENT WELLBEING</li> <li>• COUNSELLING FOR CHILD DEVELOPMENT</li> </ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>TOTAL NUMBER OF CREDITS</b>	<b>22</b>			

# **SEMESTER I**

<b>Semester I</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
<b>Course</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
<b>HDCSCC 1</b> RESEARCH METHODS	4		1	5
<b>HDCSCC 2</b> EARLY CHILDHOOD CARE AND EDUCATION	4	2		6
<b>HDCSCC 3</b> DEVELOPMENT IN CHILDHOOD	4	2		6
<b>HDCSCC 4</b> THEORIES OF HUMAN DEVELOPMENT	4		1	5
<b>Total credits in core course</b>	22			

## **RESEARCH METHODS THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs**

### **Course Objectives:**

To provide students understandings about the basic concepts, approaches and methods in conducting research thereby enabling them to appreciate and critique the nuances of designing a research study as well the ethical dimensions of conducting researches.

### **Course Learning outcomes:**

Students will be able to:

1. Demonstrate knowledge of the scientific method, purpose and approaches to research
2. Compare and contrast quantitative and qualitative research
3. Explain research design and the research cycle
4. Prepare key elements of a research proposal
5. Explain ethical principles, issues and procedures

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Purpose of research**

**5**

- Definition, objectives and significance of research
- Types of research
- Scientific method: induction and deduction
- Research approaches: quantitative, qualitative and mixed
- Issues of relevance and cultural appropriateness

#### **UNIT II: Principles of Research in quantitative and qualitative approaches**

**30**

##### *Research design*

- Meaning and need of research design
- Components and types of research design
- Issues in design construction

##### *Sampling, methods*

- Concept of sampling, key differences in the two approaches
- Sampling methods, sample size and sampling error
- Selecting participants and contexts to examine social phenomenon

##### *Data collection and analyses*

- Methods and measurement: Measurement in research, scales and errors in measurement, reliability and validity of measurement tools
- Methods of data collection and types of data
- Immersion, deep engagement, triangulation and reflexivity in qualitative data collection
- Data management and quality control
- Transcription in qualitative data analyses
- Errors in inference – Bias and confounding, reliability and validity issues
- Ensuring reliability and validity in qualitative research

#### **UNIT III: The Research Cycle**

**10**

- Systematic literature review and referencing
- Formulating a research problem –Developing research questions and objectives, exploring research context/phenomenon
- Identifying variables, constructing hypotheses
- Deciding research approach and design
- Selection of sample/participants, choice of methods and analysis.

- Writing a research report-Styles and format.

#### **UNIT IV: Values, Social Responsibility and Ethics in Research**

**3**

- Ethical principles guiding research: from inception to completion and publication of research
- Ethical issues relating to research participants and the researcher
  - Rights, dignity, privacy and safety of participants
  - Informed consent, confidentiality anonymity of respondents, voluntary participation, harm avoidance
  - Conflicts of interest or bias, Use of inappropriate research methodology, Incorrect reporting, misuse of information

#### **TUTORIAL**

- Review and critique journal articles
  - Identify research designs used, sampling, tools and analyses.
  - Compare and contrast the research studies on different dimensions.
- Development of a group research project
  - Defining the research area, formulation of research problem and objectives, establishing operational definitions/
  - Develop a sampling plan
  - Identification of methods of data collection, development and pretesting of research tools and preparation of an outline of data analysis
  - Ethical issues in conducting the research
  - Collection and collation of data

#### **Teaching Plan:**

- **Week 1:** Definition, objectives and significance of research
- **Week 2:** Types of research, Scientific method: induction and deduction
- **Week 3:** Research approaches: quantitative, qualitative and mixed. Issues of relevance and cultural appropriateness
- **Week 4:** Meaning and need of research design; types of research design, issues in design construction
- **Week 5:** Concept of sampling, key differences in the two approaches, Selecting participants and contexts to examine social phenomenon
- **Week 6:** Sampling methods, Sample size and sampling error
- **Week 7:** Measurement in research, scales and errors in measurement, reliability and validity of measurement tools
- **Week 8:** Methods of data collection and types of data ,Immersion, deep engagement, triangulation and reflexivity in qualitative data collection
- **Week 9:** Data management and quality control; Transcription in qualitative data analyses
- **Week 10:** Errors in inference – Bias and confounding, reliability and validity issues; Ensuring reliability and validity in qualitative research
- **Week 11:** Research Cycle and writing research report
- **Week 12:** Ethics in Research

#### **Facilitating the achievement of Course Learning Outcomes:**

Unit	Course Learning	Teaching and Learning	Assessment Tasks
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No.	Outcomes	Activity	
1.	Demonstrate knowledge of the scientific method, purpose and approaches to research.	Unit transaction through power point presentations,	Assignments, Open book test
2.	Compare and contrast quantitative and qualitative research	Unit transaction through power point presentations and classroom discussion about review and critique of journal articles	Quizzes and objective test
3.	Explain research design and the research cycle	Unit transaction through power point presentations and classroom discussion using research case studies	Assignments, Open book test
4.	Prepare key elements of a research proposal	Unit transaction through power point presentations Students to develop a live research project in groups	Assignments, Open book test Assessment of live project
5	Explain ethical principles, issues and procedures	Unit transaction through power point presentations and classroom discussion about research proposals	Class assignments and quizzes

### Suggested Readings:

- Aschengrau A, Seage III GR. (2014) *Essentials of Epidemiology in Public Health*. (Third Edition). Sudbury, MA: Jones & Bartlett
- Bell, J. (1999). *Doing your research project: Guide for first time researchers in social sciences*. New Delhi: Viva Books.
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, CA.: Sage.
- Blaxter, L. Hughes, C., & Tight, K. (1999). *How to research*. New Delhi: Viva Books.
- Bryman, A. (2008). *Social research method*. Oxford: Oxford University Press.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Denscombe, M. (1999). *The good research guide for small-scale social research projects*. New Delhi: Viva Publications.

- Denzin, N. and Lincoln, Y. (Eds.) 2005. *The Sage handbook of qualitative research*. London: Sage.
- Kerlinger, F. N, & Lee, H. B. (2000). *Foundations of behavioral research*. Belmont, Calif.: Wadsworth.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier,
- Miles, M. & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. London: Sage.
- Rothman K. (2002). *Epidemiology – An introduction*. New York, NY: Oxford University Press.

## **EARLY CHILDHOOD CARE AND EDUCATION THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs**

### **Course Objectives:**

To engage with contemporary positioning of Early Childhood Care and Education, and to provide theoretically guided curricular framework for effective implementation of early childhood development programs.

### **Course Learning Outcomes:**

The students will able to-

1. Explain the contemporary emergence and positioning of Early Childhood Care and Education along a theoretically guided curricular framework
2. Plan ECCE programs keeping in mind socio-cultural diversity and knowledge of local and global methods and practices
3. Design strategies for effective capacity building and implementation of early childhood development programmes

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Emergence of early childhood development programmes 10**

- Global and Indian history, trends and achievements in ECCE
- Significance of ECCE as an economic investment in the future
- Core concepts, principles, rationale and policy for ECCE
- Current research and projected trends
- Legal provisions

#### **UNIT II: Theoretical perspectives and development during ECCE 10**

- Early childhood development theories and socio-cultural influences
- Approaches and issues in providing community based, centre based or institutional services
- Essential skills and competencies for childcare and ECCE professionals

#### **UNIT III: Development, learning and curriculum design 20**

- Diverse contexts, plurality, inclusive practices and community
- Play, development and learning in ECCE
- Stimulation, creativity and affective communication in care giving practices
- An integrated pedagogy and principles for curricular framework in ECCE
- Practices , activities, resources and planning of spaces for curricular goals

#### UNIT IV: Assessment, supervision & evaluation of ECD projects

8

- Analytical framework and resources for effective programme implementation
- Tools for individual and group assessment and evaluation of ECCE settings
- Documenting and maintaining records as source of knowledge base for ECD
- Capacity building of the professional and partnership with parents and community

#### Suggested Readings:

- Cannella, G. S., & Viruru, R. (2004). *Childhood and postcolonization: Power, education, and contemporary practice*. New York: RoutledgeFalmer.
- Carr, M. (2001). *Assessment in Early Childhood Settings*. London: SAGE Publications.
- Datta, V. (1995). Home away from home: family daycare in India. In *Suraksha: Early Childhood Care and Education*. Madras, India: MS Swaminathan.
- Gopal, A. K. (1998). *Creche services in India- an evaluation*. New Delhi, India: NIPCCD.
- Hutt, S. J., Tyler, S., Hutt, C., & Foy, H. (1989). *Play, exploration and learning*. London: Routledge.
- Kaul, V. (2002). Early childhood care and education. In R. Govinda (Ed.), *India Education Report: A profile of Basic Education* (pp. 23-34). NIEPA: Oxford University Press.
- Melhuish, E., & Petrogiannis, K. (2006). *Early Childhood Care and Education: International Perspective* (pp. 133-149). Oxon: Routledge.
- Singh, A. (Ed.). (2015). *Foundations of Human Development: Lifespan Approach*. Orient Blackswan.
- Swaminathan, M. (1985). *Who cares? A study of childcare facilities for low-income working women in India*. New Delhi, India: Centre for Women's Development Studies.

#### Teaching plan:

- **Week 1:** Global and Indian history, trends and achievements in ECCE, significance of ECCE as an economic investment in the future
- **Week 2:** Core concepts, principles, rationale and policy for ECCE, Current research and projected trends
- **Week 3:** Legal provisions
- Early childhood development theories and socio-cultural influences
- **Week 4:** Approaches and issues in providing community based, centre based or institutional services
- **Week 5:** Essential skills and competencies for childcare and ECCE professionals
- **Week 6:** Diverse contexts, plurality, inclusive practices and community
- **Week 7:** Play, development and learning in ECCE
- **Week 8:** Stimulation, creativity and affective communication in care giving practices
- **Week 9:** An integrated pedagogy and principles for curricular framework in ECCE
- **Week 10:** Practices, activities, resources and planning of spaces for Curricular goals
- **Week 11:** Analytical framework and resources for effective programme implementation, Tools for individual and group assessment and evaluation of ECCE settings
- **Week 12:** Documenting and maintaining records as source of knowledge base for ECD, Capacity building of the professional and partnership with parents and community

#### Facilitating the achievement of Course Learning Outcomes:

Unit	Course Learning	Teaching and Learning	Assessment Tasks
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No.	Outcomes	Activity	
1.	Explain the contemporary emergence and positioning of Early Childhood Care and Education along a theoretically guided curricular framework	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on need and rationale for ECCE</li> <li>• Lecture &amp; discussion specific to current research in ECCE</li> <li>• Audio visual resources</li> </ul>	<p>Classroom presentation and discussions</p> <p>Review of current research on significance of ECCE</p>
2.	Plan ECCE programs keeping in mind socio-cultural diversity and knowledge of local and global methods and practices	<ul style="list-style-type: none"> <li>• Review academic writings and research studies on local and global trends on ECCE</li> <li>• Individual student presentations with inputs from teacher and fellow students</li> <li>• Read journal articles, books on principles of curricular framework</li> <li>• Examine select readings on capacity building of ECCE professionals</li> </ul>	<p>Written assignments on selected topics related to</p> <p>Group/ individual presentations on select successful ECCE approaches and or programs</p> <p>Class test on areas covered</p> <p>Group discussion on importance of play in learning and development</p>
3.	Design strategies for effective capacity building and implementation of early childhood development programmes	<ul style="list-style-type: none"> <li>• Films and audio-visual input</li> <li>• Invited expert speakers</li> </ul>	<p>Criteria that can be used to evaluate an ECCE setting</p> <p>Enlist points that can address diversity and plurality in an ECCE program</p>

### **EARLY CHILDHOOD CARE AND EDUCATION PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Course Objectives**

To understand pedagogy and principles of curriculum framework along with understanding of community orientation and socio-cultural diversity for optimal development of young children in ECCE programs.

**COURSE LEARNING OUTCOMES:**

Students would be able to-

1. Develop skills to use principles of pedagogy and curricular framework for optimal development through ECCE programs
2. Develop ways to address socio-cultural diversity through local and global methods and practices
3. Devise and develop strategies for effective capacity building, implementation and assessment of early childhood care and education programs
4. Acquire necessary skills to work effectively with families and form collaborative relationships with them

**CONTENT**

**PERIODS**

- Recording individual children’s physical motor, language, intellectual, and social-emotional skills. 4
- Observations to gauge adult child interactions to facilitate expression, communication and curiosity in ECCE programs 4
- Plan and implement developmentally appropriate, child-centered activities which are sensitive to diverse contextual needs 4
- To observe existing care programs (crèche, daycare) and get familiarized with guidelines in accordance with contemporary and prevalent policies. 4
- Design learning environment and teaching learning resources for early childhood programs; Planning spaces and identifying materials for play and joyful learning 4
- Organizing activities and resources for curricular goals; Developing tools, play materials and classroom display 4
- Learning ways to track and record children’s progress and communicating with parents 4
- Building skills to assess quality of programs with sensitivity to ecological contexts 4
- Understanding state interventions such as ICDS, meal services and health advocacy 4
- Visits to select ECCE centers 4
- Workshops on use of various art forms for and with children 4
- Organize a workshop/exhibition involving parents of preschool children 4

**Suggested Readings:**

- Brazelton, B. T. & Greenspan S. I., (N.D.). *The irreducible needs of children: What Every Child Must Have to Grow, Learn, and Flourish.*
- Clarke P. (2001). *Teaching & Learning: The Culture of Pedagogy.* New Delhi: Sage publications.
- Gammage, P. (2008). *The Social Agenda and Early Childhood Care and Education. Can We Really Help Create a Better World? Online Outreach Paper 4.* The Hague. The Netherlands. Bernard van Leer Foundation
- Gupta, A. (2006). *Early Childhood Education, Postcolonial Theory, and Teaching Practices in India: Balancing Vygotsky and the Veda.* New York: Palgrave
- Mohite, P. & Prochner, L. (2009). *Early Childhood Care and Education: Theory and Practice.* New Delhi: Concept Publishing Company

## **DEVELOPMENT IN CHILDHOOD THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs**

### **Course Objectives:**

To enhance knowledge of the developmental processes and principles of child development and to foster engagement with the critical areas and domains of development during infancy and childhood years.

### **Course Learning Outcomes:**

Students will be able to-

1. Demonstrate knowledge of developmental processes and principles
2. Engage with the critical areas in the study of development in childhood
3. Demonstrate knowledge of domains of development during childhood

### **CONTENTS**

### **PERIODS**

<b>UNIT I: Introduction to the study of Human Development</b>	<b>12</b>
<ul style="list-style-type: none"><li>• Disciplinary views on Human Development</li><li>• Philosophy of life span development</li><li>• Biological and environmental influences</li><li>• Developmental pathways, developmental tasks and culture</li></ul>	
<b>UNIT II: Beginnings of human life</b>	<b>12</b>
<ul style="list-style-type: none"><li>• Reproduction, family planning and infertility</li><li>• Prenatal Development</li><li>• Child birth</li><li>• Neonate</li></ul>	
<b>UNIT III: Conception of Infancy</b>	<b>12</b>
<ul style="list-style-type: none"><li>• Physical and motor development</li><li>• Cognition and language</li><li>• Social and emotional development</li></ul>	
<b>UNIT IV: Early childhood and Middle childhood competencies</b>	<b>12</b>
<ul style="list-style-type: none"><li>• Physical and motor development</li><li>• Cognition and language</li><li>• Social and emotional development</li><li>• Moral development</li></ul>	

### **Suggested Readings:**

- Berry, J.W, Dasen, Saraswathi, T.S. (1997). Handbook of Cross-Cultural Psychology, Volume II. MA: Allyn & Bacon.
- Berk, L.E. (2009). Child Development. MA: Pearson.
- Bornstien, M.H. (2012). Handbook of Cultural Developmental Science..New York: Psychology Press.
- Keller, H. (2001). Cultures of Infancy. New York: Psychology Press.
- Khalakdina, M. (2008). Human Development in the Indian Context: A Socio-cultural Focus. New Delhi: Sage.

- Palaioulogou, I. (2012). Ethical practices in Early Childhood. L.A.: Sage
- Rice, F.P. (1998). Human Development: A life Span Approach. N.J.: Prentice Hall
- Slater, A. & Bremner, G. Eds. (2003). An Introduction to Developmental Psychology. U.K.: Blackwell.
- Smith, P.K. & Craig, H.M. Eds. (2004). Blackwell Handbook of Childhood Social Development. MA: Blackwell.

**Teaching plan:**

- **Week 1:** Disciplinary views on Human Development, Philosophy of life span development
- **Week 2:** Biological influences
- **Week 3:** Environmental influences, Developmental pathways, developmental tasks and culture
- **Week 4:** Reproduction, family planning and infertility
- **Week 5:** Prenatal development
- **Week 6:** Child birth & the neonate
- **Week 7:** Physical development: Infancy to Middle Childhood Years
- **Week 8:** Motor development: Infancy to Middle Childhood Years
- **Week 9:** Cognition: Infancy to Middle Childhood Years
- **Week 10:** Language: Infancy to Middle Childhood Years
- **Week 11:** Social and emotional development: Infancy to Middle Childhood Years
- **Week 12:** Moral Development: Infancy to Middle Childhood Years

**Facilitating the achievement of course learning outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Demonstrate knowledge of developmental processes and principles	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on area</li> <li>• Lecture &amp; discussion specific to areas</li> <li>• Audio visual resources</li> </ul>	Classroom presentation and discussions
2.	To engage with the critical areas in the study of development in childhood	<ul style="list-style-type: none"> <li>• Review academic writings and research studies</li> </ul>	Written assignments on selected topics
3.	To demonstrate knowledge of domains of development during childhood development	<ul style="list-style-type: none"> <li>• Lecture on domains of development and stages</li> <li>• Individual student presentations with inputs from teacher and fellow students</li> <li>• Read journal</li> </ul>	Group/ individual presentations on domains and concepts  Class test on areas covered

		articles, books • Examine select readings • Invited expert speakers on select areas	
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### **DEVELOPMENT IN CHILDHOOD PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Course Objectives:**

To develop skills of studying children across domains and contexts, to undertake an appraisal of tools and techniques of studying children and to learn skills of engaging with children for a deeper understanding of Human Development.

**Course Learning Outcomes:**

The student will be able to-

1. undertake studies of children across domains
2. identify and use appropriate tools and techniques of studying children
3. engage and work with children across contexts

**CONTENT**

**PERIODS**

- |                                                                                                                                                     |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----|
| • Visit to understand institutional provisions for care and development of children; neonatal unit, paediatric ward, orphanage, crèche and day-care | 24 |
| • Practical assignments on each stage of development across childhood and domains                                                                   | 8  |
| • Case study of a child using mixed methods                                                                                                         | 8  |
| • Design and implement a project using audio-visual technology to communicate developmental pathways to parents, teachers and students.             | 8  |

### **THEORIES OF HUMAN DEVELOPMENT THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Course Objectives:**

To learn about the history of study of human development; to comprehend the cultural notions of children and childhood; to study evolving contemporary theories in the discipline; and to provide a framework to locate human development and childhood in an interdisciplinary context.

**COURSE LEARNING OUTCOMES:**

Students will be able to-

1. Understand the historical and philosophical traditions and theories of development
2. Comprehend the task of knowledge construction with reference to human development and childhood studies

3. Appreciate and analyse the different theories of development
4. Develop skills for critical appraisal and construction of theories of development

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I: Theory, construct, phenomena</b>	<b>6</b>
<ul style="list-style-type: none"> <li>• Theorizing and its philosophical underpinning</li> <li>• What is a theory?</li> <li>• Links between phenomena, theory and method</li> </ul>	
<b>UNIT II: Theories of Development: Biological and Environmental</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Evolutionary theory, Psychosexual theory, Cognitive- Developmental theory</li> <li>• Learning theory, Social Role theory, Life-course theory</li> <li>• Grounded theory</li> </ul>	
<b>UNIT III: Theories of Development: Social, Cognitive, Person-Environment</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Psycho-social theory, Dynamic systems theory, Constructivist perspective</li> <li>• Vygotsky's socio-cultural perspective, Theory-of-mind</li> <li>• Perspectives from Positive Psychology; Humanistic Theories</li> <li>• Theories of self in the Indian context</li> </ul>	
<b>UNIT IV: Cultural context for theory development</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Revisiting theories of Human Development</li> <li>• Post-colonial perspectives</li> <li>• Indigenous and universal theories of Human Development</li> <li>• Parental Ethnotheories</li> <li>• Emerging trends in contemporary cultural research</li> <li>• Cross-disciplinary and cross-theory learning and applications in Human Development</li> </ul>	
<b>UNIT V Application</b>	<b>6</b>
<ul style="list-style-type: none"> <li>• Critique any one theory.</li> <li>• Present the life and works of a theorist on the lines of a psychobiography.</li> <li>• Application of theoretical construct</li> </ul>	

**Suggested Readings:**

- Aries, P. (1962). *Centuries of Childhood: A social history of family life*. London: Jonathan Cape Ltd.
- Beattie, J. (1964). *Other cultures*. London: Cohn and West.
- Charmaz, K. (2014). *Constructing Grounded Theory*. USA: Sage
- Frazer, J.G. (2004). *The Golden Bough: A study in magic and religion*. USA: Cosmo.
- Geertz, C. (1993). *The interpretation of cultures*. New York: Basic Books.
- James, A., & James, A. (2008). *Key concepts in Childhood Studies*. LA: Sage.
- James, A. & Prout, A. (2001) *Constructing and reconstructing childhood: Contemporary issues in the Sociological study of childhood*. London: Routledge.
- Jenks, C. (2005). *Childhood: Critical concepts in Sociology*. New York: Routledge.
- Kevill-Davies, S. (1991). *Yesterday's children: the antiques and history of childcare*. England: Antique Collectors' Club.
- Paranjpe, A.C. (2002). *Self and Identity in modern Psychology and Indian thought (Path in Psychology)*. New York: Springer.
- Pattanaik, D.D. (2006). *Myth=Mithya: A handbook of Hindu mythology*. New Delhi: Penguin.
- Ramanujan., A.K. (1997). *Flowering tree: And other oral tales from India*. USA: Viking.

- Ramanujan., A.K. (1994). *Folk tales from India*. India: Penguin Books.
- Rogoff, B. (2003). *The cultural nature of Human Development*. USA: OUP.
- Russel, B. (2004). *History of Western philosophy*. London: Routledge.
- Sobel, D. (1999). *Galileo's daughter.: A historic memoir of science, faith and love*. New York: Walker & Co.
- Spivak, G.C. (2004). *Death of a discipline*. Calcutta: Seagull.

### Teaching Plan:

- **Week 1:** Theorizing and its philosophical beginnings- Plato, Aristotle, Socrates; What is a theory?
- **Week 2:** Links between phenomena, theory and method; Grounded theory
- **Week 3:** Evolutionary theory; Psychosexual theory
- **Week 4:** Cognitive- Developmental theory
- **Week 5:** Learning theory; Social Role theory; Life-course theory
- **Week 6:** Psycho-social theory, Dynamic systems theory, Constructivist perspective
- **Week 7:** Vygotsky's socio-cultural perspective, Theory-of-mind
- **Week 8:** Perspectives from Positive Psychology; Humanistic Theories; Theories of self in the Indian context
- **Week 9:** Revisiting theories of Human Development; Western domination and Post-colonial perspectives
- **Week 10:** Indigenous and universal theories of Human Development; Parental Ethnotheories
- **Week 11:** Emerging trends in contemporary cultural research; Cross-disciplinary and cross-theory learning and applications in Human Development
- **Week 12:** Critique any one theory; Present the life and works of a theorist on the lines of a psychobiography; Outline the framework for development of a new theoretical perspective using secondary sources.

### Facilitating the achievement of course learning outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the historical and philosophical traditions and theories of development	-Watching short films on early philosophers -Power point presentations with pictures, excerpts from original writings reproduced	Analyse the writings of any one philosopher (Western and Indian) Make a presentation of the same in class
2.	Comprehend the task of knowledge construction with reference to human development and childhood studies; and Appreciate and analyse the different theories of development	Flowcharts/diagrammatic representations of theory construction process  Detailed presentations on selected listed theories of human development and their cultural application	Critically analyse life and works of selected theorists  Comments and discussions on their applicability

3.	<p>Comprehend the task of knowledge construction with reference to human development and childhood studies; and</p> <p>Appreciate and analyse the different theories of development</p>	<p>Flowcharts/diagrammatic representations of theory construction process</p> <p>Detailed presentations on selected listed theories of human development and their cultural application</p>	<p>Critically analyse life and works of selected theorists</p> <p>Comments and discussions on their applicability</p>
4.	<p>Develop skills for critical appraisal and construction of theories of development</p>	<p>Collating studies on cultures and identifying indigenous and ethnotheories</p> <p>Emphasizing studies using multiple and cross-disciplinary theoretical pathways</p>	<p>Identifying and presenting studies on selected cultures</p> <p>Debating evolution of ethno-worldviews and the critically analyse contributions of Western-dominated research in the history of the discipline</p>
5.	<p>Develop skills for critical appraisal of theoretical constructs</p>	<p>Critically evaluate select theoretical constructs</p>	<p>Collect data on any one theme, using suitable methods and present a novel emerging theoretical perspective</p> <p>Individual group presentation of select theoretical constructs</p>

# **SEMESTER II**

<b>Semester II</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
<b>Courses</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
<b>HDCSCC 5</b> STATISTICS AND COMPUTER APPLICATIONS	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSCC 6</b> DIVERSITY, DISADVANTAGE AND EQUITY	<b>4</b>			<b>4</b>
<b>HDCSCC 7</b> DEVELOPMENT IN ADOLESCENCE AND YOUTH	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSCC 8</b> LAW, POLICY AND PROGRAMS FOR WOMEN AND CHILDREN	<b>4</b>			<b>4</b>
<b>HDCSCC 9 Integrated practical</b> ASSESSMENT AND EVALUTAION IN HUMAN DEVELOPMENT		<b>4</b>		<b>4</b>
<b>HDCSOE</b> PARENTING AND HIGH RISK INFANTS	<b>2</b>			<b>2</b>
<b>TOTAL NUMBER OF CREDITS</b>	<b>26</b>			

# STATISTICS AND COMPUTER APPLICATIONS THEORY

**Maximum Marks: 100**

**Duration: 3Hrs**

## **Course Objectives:**

To understand the basic concepts, theories and methods in statistics; to learn basic statistical procedures for research, to understand applications of statistical techniques for analysis and interpretation.

## **Course Learning Outcomes:**

1. Differentiate between the qualitative and quantitative methods of analysis of data
2. Suitably apply data reduction strategies and illustrate data using various graphical methods
3. Use appropriate parametric and non parametric statistical tests
4. Draw conclusions and interpretations from the analysis of data using various statistical softwares

## **CONTENTS**

## **PERIODS**

### **UNIT I: Introduction to statistics**

**4**

- Basic principles and concepts in statistics
- Orientation to qualitative and quantitative research procedures
- Measurement and computation- Scales of measurement, Reliability and validity

### **UNIT II: Organisation and presentation of data**

**10**

- Qualitative and quantitative data- Coding & data reduction strategies
- Organisation of Data: Frequency distributions vs. thematic analysis
- Percentage, percentile ranking and frequencies
- Univariate, bivariate and multivariate tables
- Graphic representation: Graphs, diagrams and charts

### **UNIT III: Descriptive Statistics**

**6**

- Applications of descriptive statistics
- Measures of Central tendency and Variability

### **UNIT IV: Probability and normal distribution**

**12**

- Basic principles and applications of probability
- Normal curve
- Characteristics of distributions: Skewness, kurtosis
- Testing hypotheses: Levels of significance and p values
- Errors in hypothesis testing: Type I, Type II
- Sampling distribution
- Standard scores, calculation and application

### **UNIT V: Statistical tests**

**12**

- Concept of parametric and non-parametric tests, statistical tests and level of measurement
- Parametric tests of difference: T test, ANOVA and post hoc analysis of significance
- Parametric tests of association: Pearson's product moment  $r$
- Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis
- Non-parametric tests of association: Spearman's  $r$
- Chi-square test
- Regression and its applications

- Tests for ascertaining reliability of instruments

#### UNIT VI: Analysis and interpretation

4

- Guidelines for selecting an appropriate test
- Interpreting results- Statistical inference
- Research Conclusion and recommendations

#### Teaching Plan:

- **Week 1:** Basic principles and concepts in statistics, Orientation to qualitative and quantitative research procedures, Measurement and computation- Scales of measurement, Reliability and validity
- **Week 2:** Qualitative and quantitative data- Coding & data reduction strategies, Organisation of Data: Frequency distributions vs. thematic analysis
- **Week 3:** Percentage, percentile ranking and frequencies, Univariate, bivariate and multivariate tables
- **Week 4:** Graphic representation: Graphs, diagrams and charts, Applications of descriptive statistics
- **Week 5:** Measures of Central tendency and Variability, Basic principles and applications of probability
- **Week 6:** Normal curve, Characteristics of distributions: Skewness, kurtosis, Testing hypotheses: Levels of significance and p values
- **Week 7:** Errors in hypothesis testing: Type I, Type II, Sampling distribution, Standard scores, calculation and application
- **Week 8:** Concept of parametric and non-parametric tests, statistical tests and level of measurement
- **Week 9:** Parametric tests of difference: T test, ANOVA and post hoc analysis of significance, Parametric tests of association: Pearson's product moment r
- **Week 10:** Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis, Non-parametric tests of association: Spearman's r
- **Week 11:** Chi-square test, Regression and its applications, Tests for ascertaining reliability of instruments
- **Week 12:** Guidelines for selecting an appropriate test, Interpreting results- Statistical inference

#### Facilitating the achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the basic concepts, theories and methods in statistics and Differentiate between the qualitative and quantitative methods of analysis of data	Unit transaction through power point presentations,	Assignments, Open book test
2.	Suitably apply data reduction strategies and illustrate data	Unit transaction through power point presentations and	Quizzes and objective test

	using various graphical methods	classroom discussion	
3.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
4.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
5	Use appropriate parametric and non-parametric statistical tests	Unit transaction through power point presentations and classroom discussion	Class assignments and quizzes
6	Draw conclusions and interpretations from the analysis of data	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test

## **STATISTICS AND COMPUTER APPLICATIONS PRACTICAL**

**Maximum Marks: 50**

**Duration: 3Hrs**

### **Course Objectives:**

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

### **Course Learning Outcomes:**

The students will be able to-

1. Identify various types of data measurement tools/tests/procedures and understand the concept of standardisation and reliability and validity.
2. Apply various data reduction and coding methods on quantitative and qualitative data.
3. Organise the data and effectively use appropriate quantitative and qualitative statistical softwares for analysis of data
4. Draw conclusions and interpretations from the analysed data and write reports.

### **TEACHING PLAN FOR THE PRACTICAL**

#### **Week 1, 2 and 3**

- Review of Measurement tools/tests/procedures: Standardisation, Reliability, Validity

#### **Week 4 and 5**

- Data reduction strategies and Coding of quantitative and qualitative data

#### **Week 6, 7, 8 and 9**

- Analysis of data using appropriate statistical software (, Qualitative and quantitative open source software)

## Week 10

- Data Visualization

## Week 11 and 12

- Data Interpretation and report writing

### Facilitating the achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	<b>Week 1 &amp; 2</b> Identification of various types of data measurement tools/tests/procedures and understanding the concept of standardisation and reliability and validity	Standard tools/test methods and procedures will be reviewed to understand concepts of reliability and validity	Standardised tools will be given to students and activities will be planned to understand the concept of standardisation and determination of reliability and validity
2	<b>Week 3</b> Introduction to computer tools and software in statistical analysis	Open source and other software for quantitative and qualitative data analysis will be reviewed and students will be made familiar about their use	Students gets familiarized with basic functions and tools of any statistical software
3.	<b>Week 4 and 5</b> Application of various data reduction and coding methods on quantitative and qualitative data.	Data collected using standard measurement tools will be organised using appropriate data reduction strategies and coded	Data organisation through spread sheets – manually and using computers. Display of data using graphical representation methods.  Data is collected, coded and formulates tables using appropriate software
3.	<b>Week 6,7 8 and 9</b>  To be able to organise the data and effectively use appropriate quantitative and qualitative statistical softwares for analysis of data	Data analysis using suitable quantitative and qualitative software	Assignments to be planned using statistical software for  Data entry and its analysis.

			Use of statistical test for analysis
4.	<b>Week 10, 11 and 12</b>  Draw conclusions and interpretations from the analysed data and write reports	Data interpretation and Report writing	Assignments on interpretation of the analysed data  Statistical conclusion and Research conclusion

### Suggested Readings:

- Agresti, A. & Franklin C.A. (2009) *Statistics: The Art and Science of Learning from Data* ( Second Edition) Boston,MA: Pearson Prentice Hall, ISBN 978-0-13-513199-2
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage.
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.
- Diez, D. M., Barr, C. D., Cetinkaya-Rundel M. (2015). *OpenIntro Statistics*:((Third Edition). CreateSpace Independent Publishing Platform. ISBN-10: 194345003X, ISBN-13: 978-1943450039 <http://www.openintro.org/stat/textbook.php>.
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Fowler, F.J. (1988). *Survey Research Methods. Applied Social Research Methods Series, Vol. 1*. Newbury Park, CA: Sage.
- Greene, S. and Hogan, D. (Eds.). (2005). *Researching Children's Experiences: Methods and Approaches*. London: Sage.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier,
- Minium, E. W., King, B. M., & Bear, G. (1995/2004). *Statistical Reasoning for Psychology and Education*. New York: Wiley and Sons.
- Muijs, D. (2004). *Doing Quantitative Research in Education with SPSS*. London: Sage.

## DIVERSITY, DISADVANTAGE AND EQUITY THEORY

**Maximum Marks: 100**

**Duration: 3 Hrs**

### Course Objectives:

To comprehend diversity of childhood in India, become aware of the status of children from disadvantaged groups, understand the role of state and various approaches to working with families and communities for equity.

### Course Learning Outcomes:

Students will be able to-

1. To understand the diversity of childhood in India and its implications for equity
2. To know the status of children in India and correlates of economic, social and spatial disadvantages

3. To critically analyse the concerns related to specific groups.
4. To identify the role of state, various approaches and methods adopted for working with families and communities.

<b>CONTENTS:</b>	<b>PERIODS</b>
<b>Unit I: Diversity, disadvantage and equity</b>	<b>10</b>
<ul style="list-style-type: none"> <li>• Concepts of diversity, disadvantage and equity</li> <li>• Discrimination and exclusion</li> <li>• Situation analysis of children in India to understand diversity and disadvantage</li> <li>• Human Development Indices (HDI): key dimensions of human development</li> </ul>	
<b>Unit II: Disadvantage and its implications</b>	<b>18</b>
<ul style="list-style-type: none"> <li>• Poverty and inequality</li> <li>• Correlates of social inequality: Gender, Scheduled Castes, Scheduled Tribes, Other Backward Classes (OBC), Socio-religious-ethnic minorities, Migrant communities, Persons with disabilities, Urban deprived groups.</li> <li>• Spatial inequality: Rural-urban, geographical isolation and conflict zones</li> <li>• Identity and personhood</li> </ul>	
<b>Unit III: Principles and approaches for working with families and communities</b>	<b>10</b>
<ul style="list-style-type: none"> <li>• Participatory approaches and methods</li> <li>• Interface between the child, family and the State</li> <li>• Valuing diversity for development</li> <li>• Valuing play for children's development</li> </ul>	
<b>Unit IV: Equity and inclusion</b>	<b>10</b>
<ul style="list-style-type: none"> <li>• State initiatives in addressing diversity and equity</li> <li>• Rights based programming</li> <li>• Child Rights within the framework of Human Rights and cultural contexts</li> <li>• Institutional practices for equity and inclusion</li> </ul>	

#### **Suggested Readings:**

- Drèze, J, & Sen, A. (2013). *An uncertain glory: India and its contradictions*. Princeton, NJ: Princeton University Press.
- Centre for Equity Studies (2017). *India Exclusion Report, 2017*. New Delhi: Author
- Nielsen, K., Fibiger, M., & Skoda, U. (Eds.). (2013). *Navigating Social Exclusion and Inclusion in Contemporary India and Beyond: Structures, Agents, Practices*. Anthem Press.
- Govinda, R. (2013). *Who goes to school? Exploring exclusion in Indian education*. New Delhi: Oxford University Press.
- Grieshaber, S. & Cannella, G. S. (2001). *Embracing Identities in Early Childhood Education: Diversity and Possibilities*. NY: Teachers College Press.
- Oomen, T.K. (2014). *Social inclusion in independent India: dimensions and approaches*. New Delhi: Orient Blackswan.
- Ramachandran, V. (2018). *Inside Indian Schools: The Enigma of Equity and Quality*. Oxon: Routledge
- Verma, G K., Bagley, C; Jha, M. (2007). *International Perspectives on Educational Diversity and Inclusion*. Abingdon, Oxon: Routledge.

#### **Teaching Plan:**

- **Week 1:** Concepts of diversity, disadvantage and equity, Discrimination and exclusion

- **Week 2:** Situation analysis of children in India to understand diversity and disadvantage, Human Development Indices (HDI): key dimensions of Human Development
- **Week 3:** Poverty and inequality, Correlates of social inequality: gender
- **Week 4:** Scheduled Castes, Scheduled Tribes, Other Backward Classes.
- **Week 5:** Socio-religious-ethnic minorities, migrant communities
- **Week 6:** Persons with disabilities, urban deprived groups.
- **Week 7:** Spatial inequality: Rural-urban, geographical isolation and conflict zones
- **Week 8:** Identity and personhood, Participatory approaches and methods
- **Week 9:** Interface between the child, family and the state, Valuing diversity for development
- **Week 10:** Valuing play for children's development, State initiatives in addressing diversity and equity
- **Week 11:** Rights based programming, Child Rights within the framework of Human Rights and cultural contexts
- **Week 12:** Institutional practices for equity and inclusion

### Facilitating the achievement of course learning outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	To understand the diversity of childhood in India and its implications for equity	<p>Students share aspects of their childhood and discuss the differences they experienced and noticed – and how these helped them (or didn't)</p> <p>Lecture on diversity of childhood in India and theoretical foundations of equity.</p> <p>Analysing data / photos / descriptions / narratives/ reports on different children's groups and geographies to discuss how childhoods differ for children and the implications of this for education as well other programmes to address children's needs</p> <p>Relevant books, papers – students read, collate and make presentations on selected themes</p>	<p>Explain with reasons why / how the existing diversity among various groups of children leads to inequality</p> <p>Give the design considerations behind programme being developed for a group of disadvantaged children.</p>
2.	To know the status of children in India and correlates of economic, social and spatial	<p>Examine available reports and data to develop and present a situation analysis.</p> <p>Lecture on economic, social and</p>	<p>Prepare a review paper highlighting thinkers, activists, scholars in the area.</p>

	disadvantages	<p>spatial disadvantages and how it shapes development and life and underlying theories</p> <p>Read journal articles, books to collate information on disadvantaged groups and contexts</p>	Comment on a selected article's theoretical perspective
3.	To critically analyse the concerns related to specific groups.	<p>Identify the major disadvantages and the resultant everyday problems faced by different groups of children by studying relevant books and journals</p> <p>Lecture on participatory approaches and methods.</p> <p>Examine data available on various groups of children and present a summary.</p>	<p>Prepare an introductory brochure on concerns of selected groups to be used by any organization intending to work with children from different social groups, emphasising value of diversity.</p> <p>Develop a matrix to graphically represent an analysis of concerns related to specific groups.</p>
4.	To identify the role of state, various approaches and methods adopted for working with families and communities.	<p>Study the work of different NGOs / programme working for disadvantaged groups and highlight major approaches</p> <p>Lecture on State initiatives in addressing diversity and equity and rights based programming.</p> <p>Document the role of communities in different programmes and prepare a case study</p>	<p>Describe two programmes in detail that depict the role of state in promoting equity in provision and outcomes.</p> <p>Find out from a government or private organization their institutional practices for equity and inclusion</p> <p>Prepare a presentation to illustrate aspects of any NGO's work with a marginalised community</p>

## DEVELOPMENT IN ADOLESCENCE AND YOUTH THEORY

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Course Objectives:**

To enhance knowledge of the developmental processes and principles during adolescence and youth and to foster engagement with the critical areas and domains of development during this period

**Course Learning Outcomes:**

The student will be able to-

1. Demonstrate knowledge of developmental processes and principles during adolescence and youth
2. To engage with the critical areas in the study of development in adolescence and youth
3. To demonstrate knowledge of domains of development during adolescence and youth

**CONTENTS****PERIODS****UNIT I: Development during Adolescence**

16

- Domains of Development
- Health/Social Status of Adolescents
- Developmental Pathways
- Theoretical, Research and Other Models Related to Adolescent Well-Being
- Sexual/Reproductive Health
- Developmental Tasks
- Risks and Protective factors

**UNIT II: Youth Development**

16

- Life Skills Approach
- Development and Employment
- Resilience
- Sexual/Reproductive Health
- Social relationships and Marriage
- Family Life
- Contemporary Challenges during this Stage

**UNIT III: Culture and contexts**

8

- Gender concerns and Safety
- Disparities and Social Exclusion
- Digital world and Impact

**UNIT IV: National Policy and Programmes**

8

- Situation Analysis – Adolescents and Youth in India

**Suggested Readings:**

- Berry, J.W, Dasen, Saraswathi, T.S. (1997). Handbook of Cross-Cultural Psychology, Volume II. MA: Allyn & Bacon.
- Bornstien, M.H. (2012). Handbook of Cultural Developmental Science..New York: Psychology Press.
- Khalakdina, M. (2008). Human Development in the Indian Context: A Socio-cultural Focus. New Delhi: Sage.
- Rice, F.P. (1998). Human Development: A life Span Approach. N.J.: Prentice Hall
- Slater, A. & Bremmer, G. Eds. (2003). An Introduction to Developmental Psychology.U.K.: Blackwell.
- Smith, P.K. & Craig, H.M. Eds. (2004). Blackwell Handbook of Childhood Social Development. MA: Blackwell. Adams. G.R., Montemayor, R., & Gullota, T.P. (1993).

*Biology of adolescent behavior and development (Advances in adolescent development)*. New Delhi: Sage.

- Arnett, J.J. (2012). *Adolescent psychology around the world*. New York: Psychology Press.
- Foot, H.C., Chapman, A.J., & Smith, J.R. (Eds.). (1980). *Friendship and social relations in children*. NY: John Wiley & Sons.
- Frydenberg, E. (2015). *Adolescent coping: Advances in theory, research and practice*. London: Routledge.
- Hughes, F.P. (2010). *Children, play and development*. Los Angeles: Sage.
- Magen, Z. (1998). *Exploring adolescent happiness: Commitment, purpose and fulfillment*. New Delhi: Sage.
- Rice, F.P. (1996). *The adolescent: development, relationships, and culture*. Boston: Allyn & Bacon.
- Sigel, I. E., McGillicuddy-DeLisi, A. V., & Goodnow, J. J. (2014). *Parental belief systems: The psychological consequences for children*. United Kingdom: Psychology Press.
- Arnett, J. J.; Kloep, M.; Leo B. Hendry, L.B.; & Tanner, J.L. *Debating Emerging Adulthood: Stage or Process?* New York: Oxford University Press, 2011.
- <https://www.unicef.org/adolescence/>

### Teaching plan:

- **Week 1:** Domains of Development, Developmental Tasks
- **Week 2:** Health/Social Status of Adolescents
- **Week 3:** Sexual/Reproductive Health, Risks and protective factors
- **Week 4:** Theoretical, Research and Other Models Related to Adolescent Well-Being
- **Week 5:** Life Skills Approach, Development and Employment
- **Week 6:** Resilience, Sexual/Reproductive Health
- **Week 7:** Social relationships and marriage, Family life
- **Week 8:** Contemporary Challenges during this stage
- **Week 9:** Gender concerns and safety
- **Week 10:** Disparities and Social Exclusion
- **Week 11:** Digital world and impact
- **Week 12:** National Policy and Programmes, Situation Analysis – Adolescents and Youth in India

### Facilitating the achievement of course learning outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
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1.	Demonstrate knowledge of developmental processes and principles	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on area</li> <li>• Lecture &amp; discussion specific to areas</li> <li>• Audio visual resources</li> </ul>	Classroom presentation and discussions
2.	To engage with the critical areas in the study of development in adolescence and youth	<ul style="list-style-type: none"> <li>• Review academic writings and research studies</li> <li>• Biographies of eminent persons</li> </ul>	Written assignments on selected topics Brief presentations of published biographies
3.	To demonstrate knowledge of domains of development during adolescence and youth	<ul style="list-style-type: none"> <li>• Lecture on domains of development and stages</li> <li>• Individual student presentations with inputs from teacher and fellow students</li> <li>• Read journal articles, books</li> <li>• Examine select readings</li> <li>• Invited expert speakers on select areas</li> </ul>	Group/ individual presentations on domains and concepts Class test on areas covered

### **DEVELOPMENT IN ADOLESCENCE AND YOUTH PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Course Objective:**

To develop skills of studying Adolescence and Youth across domains and contexts, to undertake an appraisal of tools and techniques of studying Adolescents and Youth, to learn skills of engaging with Adolescents and Youth for a deeper understanding of Human Development

**Course Objective Outcomes:**

The student will be able to-

1. Undertake studies of Adolescence and Youth across domains
2. Identify and use appropriate tools and techniques of studying Adolescence and Youth
3. Engage and work with Adolescence and Youth across contexts

**CONTENT**

**PERIOD**

- Visits to understand institutional provisions for development of Adolescents; school, children homes, rehabilitation centre and skill development provisions. 24
- Practical assignments on stages of development across domains. 8
- Case study using mixed methods. 8
- Design and implement a project using audio-visual technology to communicate developmental pathways to parents, teachers and students. 8

## **LAW, POLICY AND PROGRAMMES FOR CHILDREN AND WOMEN THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs**

### **Course Objectives:**

To develop an understanding of constitutional provisions, legislations, policies and programmes with reference to children and women in India.

### **COURSE LEARNING OUTCOMES:**

The students will be able to-

1. Obtain knowledge of prevalent social policies as they relate to lives of children and women
2. Be familiar with constitutional provisions and legislations for women and children
3. Be able to engage with the linkages between social policy, legislations and implementation of schemes and programmes

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Overview of provisions**

12

- Legal framework and legal action for children and women
- Historical overview of Policies and programmes (Five year plans)
- Policies and action plans
- Rights and social policies

#### **UNIT II: Constitutional provisions, laws and conventions**

24

- Constitutional Provisions
- Legislations for children and women
- Conventions for protection of children and women

#### **UNIT III: Linkages**

12

- Transacting policies into programmes
- Government role – centre, state and local level
- Public-private partnership
- NGO and corporate social responsibility in implementation of Programmes
- Effective initiatives in various domains
- Critical appraisals

### **Suggested Readings:**

- Bajpai, A (2003). Child Rights in India: Law, Policy and Practice. New Delhi:

- Bhargava, V. (2005). Adoption in India: Policies and Experiences. New Delhi: Sage Publications.
- Census of India
- Chopra, G. (2016). Child rights in India: challenges and social action. S.l.: Springer, India, private.
- Contemporary publications and documents of the Government of India, UN bodies, established International and National Organisations.
- Current Human Development Report
- Kumari, V. (2004). Creative Child Advocacy: Global Perspectives. New Delhi: Sage.
- Oxford University Press
- Selected Legislations for Children and Women.
- Kumari, V (2004). Juvenile Justice System in India: From Welfare to Rights. New Delhi: Sage. Oxford University Press
- Ministry of Women and Child Development GOI
- website [www.wcd.nic.in/](http://www.wcd.nic.in/)

#### Teaching Plan:

- **Week 1:** Legal framework and legal action for children and women
- **Week 2:** Policies and programmes in a historical overview (Five year plans), Policies and action plans
- **Week 3:** Rights and social policies women and children, Constitution rights-introduction
- **Week 4:** Constitutional Provisions for women in India
- **Week 5:** Constitutional Provisions for children in India
- **Week 6:** Government policies for women and children
- **Week 7:** Legislations for children and women
- **Week 8:** International Conventions for protection of children and women
- **Week 9:** Transacting policies into programmes, Government role – centre, state and local level
- **Week 10:** Public-private partnership, NGO and corporate social responsibility in implementation of Programmes
- **Week 11:** Effective initiatives in various domains
- **Week 12:** Critical appraisals

#### Facilitating the achievement of course learning outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
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1.	The students will obtain knowledge of prevalent social policies as they relate to lives of children and women	<p>Self directed: Read journal articles, books to collate information on various Indian and international social policies</p> <p>Lecture on role of these policies and programs in the lives of children</p> <p>Present researches on the relevance and outreach of policy and programs for women and children</p> <p>Discussion on programs and policies as a legal framework and its significance in contemporary times</p>	<p>Comment on important policies for women and children</p> <p>Present arguments for and against role of these policies and programs for women and children in India</p>
2.	The students would convey their knowledge about constitutional provisions for women and children	Review research studies recognizing role of constitutional provision for benefits of women and children in India	<p>Create audio- visual presentation on Legal provisions.</p> <p>Develop a scrap book based on cuttings from news paper articles and magazines on violation of rights and new provisions</p>
3.	The students would be able to engage with the linkages between social policy, legislations and implementation of schemes and programmes	<p>Power point presentations on description about these policies</p> <p>Individual student presentations each policy and its implementation in Indian society</p> <p>Read journal articles, books to understand influence of policy and programs for women and children on growth and development of child and woman as participants</p>	<p>Individual presentation on any one social policy for women and children reflecting on its implementation benefits and drawback for Indian society.</p> <p>Group/Individual presentation on GO and NGO initiatives</p>

		<p>Critically evaluate the content of each policy in context to its implementation section with advantages to target group</p> <p>Examine select readings related to components of social policy and law for children</p>	
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## ASSESSMENT AND EVALUATION IN HUMAN DEVELOPMENT AND CHILDHOOD STUDIES

### INTEGRATED PRACTICAL

**Maximum Marks: 100**

**Duration: 3 Hrs**

#### **Course Objectives:**

To understand the meaning and purpose of different methods of assessments with reference to Human Development and Childhood Studies, become aware of the role of evaluation of the same and acquire a repertoire of skills for working with children & relevant adults in different contexts

#### **Course Learning Outcomes:**

The students will be able to:

1. Develop skill to use techniques and methods suited for different person situations and contexts
2. Be familiar with standardised tests/protocols for the study including assessment of individuals, families/settings
3. Develop skills in recording fieldwork

#### **CONTENTS**

#### **PERIODS**

**UNIT I:** Overview of the procedures for study of children using specific and multiple methods of fieldwork 24

- Observational study of children and their life settings using ethnographic methods
- Interviewing of children and relevant adults
- Focus group discussions/PLA techniques
- Theatre based techniques/method/activities
- Archival and secondary resources of data gathering

**UNIT II:** Tools and techniques 24

- Study tests, assessment protocols and developmental norms
- Developmental: Portage, BSID
- Tests of cognition, language and behaviour
- Norms of development

**UNIT III: Evaluation design and methods**

48

- Design and implement evaluation of learning in a pre-school/primary school, (for one subject / thematic area), and analyze the data emanating from it.
- Design a programme evaluation for a small project / programme, including objectives, tools, implementation design and data analysis
- Undertake analysis of data produced by any in-depth qualitative/ quantitative evaluation study (e.g. countrywide learning assessment conducted by NCERT) in order to draw inferences and suggest an improvement plan for the programme / system evaluated.

**Suggested Readings:**

- Anandalakshmy,S., Chaudhary, N. & Sharma,N. (Eds.). (2008). Researching Families and Children: Culturally Appropriate Methods. New Delhi: Sage
- Anastasi, A. & Urbina, S. (1997). Psychological Testing (Seventh edition). Indian Reprint. Delhi: Pearson Education.
- Burgess, Robert G. (1990). In the Field: An Introduction to Field Research: Contemporary Social Research. London: Routledge.
- Denzin, N. and Lincoln, Y. 2005. The Sage Handbook of Qualitative Research. London: Sage.
- Fivush, R., & Haden, C.A. (Eds.). Autobiographical Memory and the Construction of the Narrative Self. Mahwah, N.J.: Lawrence Erlbaum.
- Gordon, T., Holland, J. Lahelma, E. and Tolonen, T. (2005). Gazing with Intent: Ethnographic Practice in Classrooms. Qualitative Research, 5.
- Hart, C. (1998). Doing a Literature Review: Releasing the Social Science Research Imagination. London: Sage.
- Mishler E. (1991) Research Interviewing: Context and Narrative. Harvard University Press, Cambridge, MA.

**OPEN ELECTIVE COURSE: PARENTING HIGH RISK INFANTS  
PRACTICAL****Maximum Marks: 100****Duration: 3 Hrs****Course Objective:**

To provide knowledge in parenting for care of high risk child from birth to 3year to enhance development and prevent delays

**Course Learning Outcomes:**

The student will be able to:

1. To recognize typical and atypical development during ages birth- 3 years
2. To theoretically understand the development of norms and recognize delays.
3. Increase ability to support the family and strengthen the parent's ability to support his/her child's development.

**CONTENTS****PERIODS****UNIT I: Parenting****10**

- Development in culture & context

- Challenges of contemporary parenting
- Understanding developmental delays in domains
- Challenges of learning child development through google searches

## **UNIT II: High Risk infants and toddlers**

14

- Neurobiological basis of early risk
- Parental Risk factors
- Child Risk factors
- Environmental Risk Factors
- Protective factors in high-risk infant cases
- Abuse and neglect specific to infants and young children
- Guidelines for child protection practice

### **Suggested Readings:**

- Branjerdporn, G., Meredith, P., Strong, J., & Garcia, J. (2017). Associations between maternal-foetal attachment and infant developmental outcomes: A systematic review. *Maternal and Child Health Journal*, 21(3), 540-553.
- Child protection intervention with high-risk infants - <https://www.communities.qld.gov.au/resources/childsafety/practice-manual/intervention-with-high-risk-infants.pdf>
- Copeland L., Parekh S. (2018) Quality Coordinated Health Care for the High-Risk Infant: The Evolving Concept of the Medical Home. In: Needelman H., Jackson B. (eds) *Follow-Up for NICU Graduates. Promoting Positive Developmental and Behavioral Outcomes for At-Risk Infants* Springer, Cham
- <http://parentintheknow.com/wp-content/uploads/2017/04/Parent-in-the-Know-Research-Basis-for-Assessments-and-Reports.pdf>
- <https://files.eric.ed.gov/fulltext/EJ843624.pdf>
- Luz, R., George, A., Vieux, R., & Spitz, E. (2017). Antenatal determinants of parental attachment and parenting alliance: How do mothers and fathers differ?. *Infant Mental Health Journal*, 38(2), 183-197.
- National Scientific Council on the Developing Child. (2012). Establishing a level foundation for life: Mental health begins in early childhood. (Working paper 6). Retrieved from Center on the Developing Child website <http://www.developingchild.harvard.edu>
- Needelman H., Jackson B. (eds) (2018). *Follow-Up for NICU Graduates. Promoting Positive Developmental and Behavioral Outcomes for At-Risk Infants* Springer, Cham.
- Pisoni, C., Garofoli, F., Tziialla, C., Orcesi, S., Spinillo, A., Politi, P. & Stronati, M. (2014). Risk and protective factors in maternal–fetal attachment development. *Early Human Development*, 90, S45-S46.
- Potharst, E. S., Aktar, E., Rexwinkel, M., Rigterink, M., & Bögels, S. M. (2017). Mindful with your baby: Feasibility, acceptability, and effects of a mindful parenting group training for mothers and their babies in a mental health context. *Mindfulness*, 1-15.
- Pridham, K. F., & Chang, A. S. (1989). What Being the Parent of a New Baby is Like: Revision of an instrument. *Research in Nursing & Health*, 12(5), 323-329.
- Rode, J. L., & Kiel, E. J. (2016). The mediated effects of maternal depression and infant temperament on maternal role. *Archives of Women's Mental Health*, 19(1), 133-140.
- Rossen, L., Hutchinson, D., Wilson, J., Burns, L., Allsop, S., Elliott, E. J. & Ainsworth, M. D. (2017). Maternal bonding through pregnancy and postnatal: Findings from an Australian Longitudinal Study. *American Journal of Perinatology*, 34(08), 808-817
- Singh, M. 8<sup>th</sup> Ed. (2017). *Care of the New Born*, CBS Publishers & Distributors

- Winston, R., & Chicot, R. (2016). The importance of early bonding on the long-term mental health and resilience of children. *London Journal of Primary Care*, 8(1), 12-14.

**Teaching plan:**

- **Week 1:** Development in culture & context; Challenges of contemporary parenting
- **Week 2:** Understanding developmental delays in domains
- **Week 3:** Challenges of learning child development through Google searches; Neurobiological basis of early risk
- **Week 4:** Parental Risk factors, Child Risk factors
- **Week 5:** Environmental Risk Factors, Protective factors in high-risk infant cases
- **Week 6:** Abuse and neglect specific to infants and young children, Guidelines for child protection practice

**Facilitating the achievement of course learning outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	To recognize typical and atypical development during ages birth- 3 years	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on area</li> <li>• Lecture &amp; discussion specific to areas</li> <li>• Audio visual resources</li> </ul>	Classroom presentation and discussions
2.	To theoretically understand the development of norms and recognize delays.	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Presentations by experts</li> <li>• Review academic writings and research studies</li> </ul>	Written assignments on selected topics Group/ individual presentations on domains and concepts  Class test on areas covered

## **SEMESTER III**

<b>SEMESTER III</b>				
<b>Number of core/elective courses</b>	<b>Credits in each core/elective course</b>			
<b>Courses</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
<b>HDCSCC 10</b> EDUCATION FOR HUMAN DEVELOPMENT	<b>4</b>			<b>4</b>
<b>HDCSCC 11</b> DEVELOPMENTAL DISABILITIES	<b>4</b>			<b>4</b>
<b>HDCSCC 12 Integrated practical</b> DEVELOPMENTAL DISABILITIES		<b>4</b>		<b>4</b>
<b>HDCSCC 13</b> Internship		<b>2</b>		<b>2</b>
<b>HDCSCC 14</b> Dissertation (seminar)		<b>2</b>		<b>2</b>
<b>HDCSEC 1 &amp; 1 (B)</b> <ul style="list-style-type: none"> <li>• WOMEN AND GENDER STUDIES</li> <li>• PARENTING AND EARLY INTERVENTION</li> </ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSEC 2 &amp; 2 (B)</b> <ul style="list-style-type: none"> <li>• SOCIOLOGY OF CHILDHOOD</li> <li>• CHILDHOOD AND ADOLESCENCE ACROSS ECOLOGICAL SETTINGS</li> </ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>TOTAL NUMBER OF CREDITS</b>	<b>28</b>			

## **EDUCATION FOR HUMAN DEVELOPMENT THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs**

### **Course Objectives:**

To develop a holistic understanding of the educational ecosystem, become aware of the critical issues that need to be addressed for quality education for all and to learn about implementation strategies in the context of ground realities.

### **Course Learning Outcomes:**

Students will be able to-

1. Explain effective teaching and learning in the classroom with reference to various practices, processes and materials.
2. Understand critical issues in development and implementation of curriculum, textbooks and teaching materials.
3. Review historical and contemporary issues related to quality in schooling, teacher development and system effectiveness with reference to human development.
4. Identify major concerns in Indian education and compare with global perspectives.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Effective classroom and learning**

**12**

- Child oriented pedagogy, active learning and the significance of relationships
- Enabling learning through use of teaching learning material
- Management of learning through planning, classroom organization and assessment
- Impact of digital technology on learning

#### **UNIT II: Human development, curriculum and materials**

**12**

- Curriculum basics and underpinnings
- Human Development as source as well as objective of curriculum
- From curriculum to practice: The role of textbooks, materials and other means
- Diversity, equity and curriculum
- Critical issues affecting curriculum development and effectiveness

#### **UNIT III: Effective school and education system**

**14**

- Historical perspective on Indian education system
- Policies, plans and programmes
- School as an organization and characteristics of a child-friendly school
- Teacher development
- Status of today's schools and system effectiveness
- Case studies of innovative schools and programmes

#### **UNIT IV: Major concerns in education**

**10**

- Participation in education
- Retention, learning and completion
- Global perspectives

### Suggested Readings:

- Alexander, R. (2000). *Culture and pedagogy: International comparisons in primary education*. Cambridge, Mass.: Blackwell.
- Govinda, R. (2013). *Who goes to school? Exploring exclusion in Indian education*. New Delhi: Oxford University Press.
- Jha , M, M. *School without walls*. (2002). India: Oxford
- Kumar , K.(2004). *What is worth teaching* (3<sup>rd</sup> ed.). New Delhi: Orient Longman
- Kumar, R. (2006) (Ed.). (2006). *The crisis of elementary education in India*. New Delhi: Sage.
- Ramachandran, V. (Ed.). (2003). *Getting children back to school: Case studies in primary education*. New Delhi: Sage.
- The National Achievement Survey (NAS). 2016. New Delhi: NCERT.
- Thomas, G. (2013). *Education: A Very Short Introduction*. Oxford University Press.

### Teaching Plan:

- **Week 1:** Child oriented pedagogy, active learning and the significance of relationships
- **Week 2:** Enabling learning through use of teaching learning material; Management of learning through planning, classroom organization and assessment
- **Week 3:** Impact of digital technology on learning
- **Week 4:** Curriculum basics and underpinnings; Human Development as source as well as objective of curriculum
- **Week 5:** From curriculum to practice: The role of textbooks, materials and other means
- **Week 6:** Diversity, equity and curriculum; Critical issues affecting curriculum development and effectiveness
- **Week 7:** Historical perspective on Indian education system
- **Week 8:** Policies, plans and programmes; School as an organization and characteristics of a child-friendly school
- **Week 9:** Teacher development; Status of today's schools and system effectiveness
- **Week 10:** Case studies of innovative schools and programmes; Participation in education
- **Week 11:** Retention, learning and completion
- **Week 12:** Global perspectives

### Facilitating the achievement of course learning outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	To explain effective teaching and learning in the classroom with reference to various practices, processes and materials	Self directed: Read journal articles, books to collate information on child centred pedagogy and active learning  Lecture on types and use of teaching learning material	Comment on a selected article's theoretical perspective.  Prepare a list of teaching learning materials that can be used for effective and active learning with children

		<p>Discussion on effective classroom organisation strategies and importance of planning</p> <p>Lecture on types and methods of assessment</p> <p>Lecture on types and impact of digital technology in learning</p>	<p>Illustrate different ways in which classroom can be organised.</p> <p>Evaluate pros and cons of different types of assessment</p> <p>Comment on how digital technology can be used in schools for effective learning</p>
2.	<p>To understand critical issues in selection of textbooks</p> <p>To identify features of effective curriculum and teaching materials</p>	<p>Review textbooks, identifying effective presentation of concepts.</p> <p>Examine primary school curriculum of state board, central board and one international board and present through group discussion.</p>	<p>Enlist criteria for selection of quality textbooks for learners</p> <p>Review a curriculum with emphasis on whether it is inclusive and equitable, characterized by quality learning, promotes lifelong learning, and relevance to holistic development</p>
3.	<p>Review historical and contemporary issues related to quality in schooling, teacher development and system effectiveness with reference to human development</p>	<p>Lecture on quality issues in education</p> <p>Individual student presentations with inputs from teacher and fellow students</p> <p>Read journal articles, books to organise information on teacher development</p> <p>Study distinct child-friendly features offered by schools and make a poster.</p> <p>Examine select readings related to historical perspective on Indian education system and highlight</p>	<p>Individual presentation on any one case study of innovative schools and programmes</p> <p>Focus group discussion on individual understanding about the need for teacher development and how it can be achieved</p> <p>Review what characterises a child-friendly school</p> <p>Comment on reforms in education historically with reflection on the contemporary education system</p> <p>Comment on flagship programmes of the Indian education system</p>

		trends  Review available reports and data to understand existing educational policies, plans and programs	
4.	Identify major concerns in Indian education and compare with global perspectives	Examine available reports and data to understand issues and concerns in Indian education system  Review available literature to understand Indian and global perspectives on education	Categorise issues with respect to expenditure, enrolment, infrastructure, student-teacher ratio, quality and others  Present arguments for developing culturally and contextually suited curriculum and pedagogy to deal with concerns in education.

## **DEVELOPMENTAL DISABILITY THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs**

### **Course Objectives:**

To develop in students the significance of children's social and ecological contexts within which developmental disabilities occur. To provide knowledge of definitions, etiology, diagnosis, and assessment of childhood disabilities and to create an understanding of the approaches and practices for inclusion and empowerment of children and families

### **Course Learning Outcomes:**

1. The student will understand conceptual approaches to developmental disabilities.
2. The student will acquire knowledge of definitions, etiology, diagnosis, and assessment of childhood disabilities

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Introduction to disability**

6

- Concepts and meaning
- Various frameworks of disability- biomedical, social, legal and political (rights perspective)

#### **UNIT II: Types of impairments and disabilities**

12

- Definitions, classification, aetiology, identification and assessment related to disabilities as defined by the Disability Act 2016

#### **UNIT III: Care, education and intervention for children and adolescents for development and inclusion.**

18

- Prevention of disabilities

- Care and intervention approaches
- Education
- Therapeutic strategies

#### **UNIT IV: Family, School and Community**

12

- Child and the family, parents, siblings, grandparents & significant others; family empowerment
- Role of school, curricular adaptations, teaching strategies, materials and resources; special and inclusive education
- Role of community; case study of a community-linked programme-
- local/national/international

#### **Suggested Readings:**

- Bailey, M. & Wolery, M. (1992). *Teaching Infants and Preschoolers with Disabilities*. New York: Macmillan.
- Baquer, A. (1994). *Disabled, Disablement, Diabolism*. New Delhi: Voluntary Health Association of India.
- Dempsey, I. (1996). Facilitating Empowerment in Families with a Member with a Disability. *Developmental Disabilities Bulletin*, 24(2), 1-19.
- Dempsey, I., Foreman, P., Sharma, N., Khanna, D., & Arora, P. (2001). Correlates of Parental Empowerment in Families with a Member with a Disability in Australia and India. *Developmental Disabilities Bulletin*, 29(2), 113-131.
- Dunst, C. J. (1985). Rethinking Early Intervention. *Analysis and Intervention*. *Developmental Disabilities*, 5, 165-201.
- Dunst, C. J., Trivette, C. M., & Deal, A.G. (1988). *Enabling and Empowering Families*. Cambridge, MA: Brookline Books.
- Hardman, M.L., Drew, C.J., and Egan, M.W. (2005). *Human Exceptionality: Society, School and Family*. Boston: Allyn and Bacon.
- Karanth, P. and Rozario, J. (2003). *Learning Disabilities in India*. New Delhi: Sage.
- Munford, R. and Sanders, J. (Eds.) (2003). *Making a Difference in Families: Research that Creates Change*. New South Wales, Australia: Allen & Unwin.
- Pandey, R. S., & Advani, L. (1996). *Perspectives in Disability and Rehabilitation*. New Delhi: Vikas Publishing House.
- Ysseldyke, J.E and Algozzine, B. (1998). *Special Education: A Practical Approach for Teachers*. New Delhi: Kanishka.

#### **Teaching plan**

- **Week 1:** Concepts and meaning; Various frameworks of disability- biomedical, social and legal
- **Week 2:** Political (Rights perspective); Definitions and classification
- **Week 3:** Aetiology and identification
- **Week 4:** Assessment related to disabilities as defined by the Disability Act 2016
- **Week 5:** Prevention of disabilities
- **Week 6:** Care and intervention approaches
- **Week 7:** Education
- **Week 8:** Therapeutic strategies
- **Week 9:** Child and the family, parents, siblings, grandparents & significant others; family empowerment

- **Week 10:** Role of school, curricular adaptations, teaching strategies, materials and resources
- **Week 11:** Special and inclusive education
- **Week 12:** Role of community; Case study of a community-linked programme local/national/international

### Facilitating the achievement of course learning outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	The student will understand conceptual approaches to developmental disabilities.	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on area</li> <li>• Lecture &amp; discussion specific to areas</li> <li>• Audio visual resources</li> </ul>	Classroom presentation and discussions
2.	The student will acquire knowledge of definitions, etiology, diagnosis, and assessment of childhood disabilities	<ul style="list-style-type: none"> <li>• Review academic writings and research studies</li> <li>• Lecture on etiology and diagnosis</li> <li>• Individual student presentations with inputs from teacher and fellow students</li> <li>• Read journal articles, books</li> <li>• Examine select readings on disabilities</li> <li>• Invited expert speakers on select disabilities</li> <li>• Films and audio-visual input</li> </ul>	Written assignments on selected topics related to individual disabilities Group/ individual presentations on each disability Class test on areas covered

## DEVELOPMENTAL DISABILITIES INTEGRATED PRACTICAL

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Course Objectives:**

To provide knowledge of definitions, etiology, diagnosis, and assessment of childhood disabilities and to create an understanding of the approaches and practices for inclusion and empowerment of children and families

**Course Learning Outcomes:**

The student will be able to:

1. Develop the skills of assessing children and adolescents for and with disability
2. Gain an understanding of methods of working with children and adolescents with disability
3. Learn the skills of providing guidance and counselling to children and their families

**CONTENTS****PERIODS**

<b>UNIT I:</b> Developmental assessment	8
<ul style="list-style-type: none"> <li>• Assessment of children and adolescents for and with disability using observations and children’s play, screening schedules, and psychometric measures</li> <li>• Assessment of institutions for children and adolescents with disability</li> </ul>	
<b>UNIT II:</b> Intervention strategies	12
<ul style="list-style-type: none"> <li>• Individual education plans (IEPs) and their use with children</li> <li>• Special education and inclusive education techniques</li> <li>• Conducting intervention activities with a child/ an adolescent</li> </ul>	
<b>UNIT III:</b> Guidance and Counselling	20
<ul style="list-style-type: none"> <li>• Developing skills of guiding and counselling with reference to disability-</li> <li>• Children and adolescents</li> <li>• Educators</li> <li>• Families</li> </ul>	
<b>UNIT IV:</b> Case profile of a child/an adolescent with disability, incorporating the techniques above	8

**Suggested Readings:**

- Anastasi, A. and Urbina, S. (2003). Psychological Testing. Delhi: Pearson Education
- Blocher, D.H. ( 2000). Counselling: A Developmental Approach 4th ed. New York: John Wiley
- Gumbiner, J. (2003). Adolescent Assessment. New Jersey: John Wiley
- Porter, L. (2003). Young Children’s Behavior: Practical Approaches for Caregivers and Teachers. London: Paul Chapman
- Redgrave, K. (2000). Care Therapy for Children. London: Continuum

**Maximum Marks: 50**

**Duration: 3Hrs**

**Course Objectives:**

To understand the nuances of scientific writing ; to develop skills in collation and presentation of scientific information and to learn the process of developing a research proposal/ project proposal

**Course Learning Outcomes:**

The student will be able to-

1. Demonstrate knowledge of scientific writing method and styles
2. Develop a research design on a topic relevant to their field
3. Prepare a systematic literature review on a select topic
4. Present a seminar of the literature review

**CONTENT**

**PERIODS**

The practical will have three components. Based on option of students for either dissertation or project work, due emphasis will be provided

- A) Research design / Project proposal** **12**
- Under the guidance of supervisor allocated prepare a research design / project proposal
- B) Skills in Technical Writing** **24**
- Learn the nuances of select technical writing styles/ guides
  - Analyze technical posters of researches in the fields
  - Analyze dissertations, research reports and project evaluation reports and their presentations
- C) Review of Literature & Seminar** **12**
- Prepare a literature review on a select topic using an approved style guide
  - Conduct Plagiarism check of document prepared
  - Present an oral seminar on the topic

**Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	<b>Week 1 2 &amp; 3</b>  Demonstrate knowledge of scientific writing method and styles	Students oriented the nuances of select technical writing styles/ guides Analyze technical posters of researches in the fields Analyze dissertations, research reports and project evaluation reports Videos on scientific	Quiz and exercises will be given to students

		writing shown	
2	<b>Week 3 4 5 6 7 &amp; 8</b> Develop a research design on a topic relevant to their field	Along with allocated supervisors students will work on deciding a topic of research, review literature and develop an appropriate research design	Students submit the research design to technical review board for review and comments
3.	<b>Week 9&amp; 10</b> Prepare a systematic literature review on a select topic	Students collate the literature review done about their research topic selected and prepare a document based on it.  Students review old seminar documents and critique their presentation	Students literature review document reviewed by seminar committee  Plagiarism test done of final document
3.	<b>Week 11&amp; 12</b> Present a Seminar based on the literature review done	Students watch videos of seminar presentations and critique them.  Prepare a seminar presentation of	Students presentations evaluated by the departmental seminar committee

### Suggested Readings:

- Alley, M. (2018). *The Craft of Scientific Writing*. New York: Springer.
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.

- Blum, D., Knudson M., and Henig, R. M. (2005) *Field Guide for Science Writers: The Official Guide of the National Association of Science Writers*. USA; Oxford University Press. <http://www.nasw.org/field-guide>
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Katz, M. (2009) *From Research to Manuscript: A Guide to Scientific Writing (2<sup>nd</sup> Ed)*. New York : Springer
- <http://www.apastyle.org/>
- <http://www.citethisforme.com/guides>

## WOMEN AND GENDER STUDIES THEORY

**Maximum Marks: 100**

**Duration: 3 Hrs**

### **Course Objectives:**

To study the position of men and women in society and understand it in terms of theories, cultural reality, social construction and popular culture.

### **Course Learning Outcomes:**

Students will be able to:

1. Explain the contemporary emergence and positioning of Gender
2. Explain theoretical framework of gender
3. Identify reasons for differences in the lives of men and women
4. Develop skills for critical appraisal of gender issues

### **CONTENTS:**

### **PERIODS**

<b>Unit I: Introduction to Gender Studies</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Biological differences and Social Construction of gender</li> <li>• Growing up in gendered world</li> <li>• Patriarchy and its influence on gender identity and gender roles</li> <li>• Cultural meaning of gender as it intersects class, caste and sexuality</li> </ul>	
<b>Unit II: Portrayals of men and women in popular culture</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Representation of differences in children's media</li> <li>• Women in advertisements, television and films</li> <li>• Representation of gender in myths, literature and other written texts</li> </ul>	
<b>Unit III: Theories to understand Gender</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Human Development theories</li> <li>• Three waves of feminism and beyond</li> <li>• Feminist theories</li> </ul>	
<b>Unit IV: Gender issues in life</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Mental health, violence against women and women in later adulthood</li> <li>• Work, parity and leadership and Gender</li> <li>• Politics and Gender</li> <li>• Social Welfare: Gender and policies</li> <li>• Contemporary sexuality and reproduction</li> </ul>	

### **Suggested Readings:**

- Agosin, M. (2003). *Women, Gender and Human Rights: A Global Perspective* (1st ed.). Rajasthan, India: Rawat.
- De Beauvoir, S. (1983). *The Second Sex*. Harmondsworth: Penguin.
- Fischer, A.H. (2000). *Gender and Emotion: Social Psychological Perspectives*. New York: Cambridge University Press.
- Chaudhuri, M. (2005). *Feminism in India: Issues in contemporary Indian Feminism*. New Delhi: Zed books.
- Andersen, M.L. (2003). *Thinking about Women: Sociological Perspectives on Sex and Gender*. Sixth Edition. New York: Macmillan Publishing Company.
- Mead, M. (1950). *Male & Female*. New York: Harper Perennial.
- Sharma, K. (1985). *Gender concerns and Development*. New Delhi: Centre for Women's Development Studies
- Myra, M.F., Lorber, J., & Hess, B.B. (Ed.) (1999). *Revisioning Gender: The Gender Lens*. London: Sage.
- Biswal, T. (2006). *Human Rights, Gender and Environment*. New Delhi: Viva Books.
- Kishwar, M. (1999). *Off the Beaten Track: Rethinking Gender Justice for Indian Women*. New Delhi: OUP.
- Agnes, F. (1999). *Law and Gender Inequality: The Politics of Women's Rights in India*. Oxford University Press.
- Saika, N. (2008). *Indian Women: A Socio-Legal Perspective*. New Delhi: Serials Publication.
- Bhasin, K. (2000). *Understanding Gender*. New Delhi: Kali For Women.
- Goel, A., Kaur, A., & Sultana, A. (2006). *Violence against Women: Issues and Perspectives*. New Delhi: Deep & Deep.
- Sohoni, K.N. (1994). *Status of Girls in Development Strategies*. New Delhi: Haranand Publications.
- Menon, R. & Bhasin, K. (1998). *Borders and Boundaries: Women in India's Partition*. New Delhi: Kali for Women.
- Bhasin, K. (1993). *What is Patriarchy?* New Delhi: Kali for Women.

### Teaching Plan

- **Week 1:** Biological differences and Social Construction of gender, Growing up in gendered world
- **Week 2:** Patriarchy and its influence on gender identity and gender roles
- **Week 3:** Cultural meaning of gender as it intersects class, caste and sexuality
- **Week 4:** Representation of differences in children's media; Women in advertisements, television and films
- **Week 5:** Representation of gender in myths, literature and other written texts
- **Week 6:** Human Development theories
- **Week 7:** Three waves of feminism and beyond
- **Week 8:** Feminist theories
- **Week 9:** Mental health, violence against women and women in later adulthood
- **Week 10:** Work, parity and leadership and Gender; Politics and Gender
- **Week 11:** Social Welfare: Gender and policies
- **Week 12:** Contemporary sexuality and reproduction

## Facilitating the achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	To understand the social construction of gender	<p>Students share aspects of their childhood and discuss the differences they experienced and noticed – and how these helped them (or didn't)</p> <p>Lecture on patriarchy in India</p> <p>Relevant books, papers – students read, collate and make presentations on selected themes</p>	<p>Explain with reasons why / how the social construction of gender influence the lives of people</p> <p>Give the design considerations behind programme being developed for a group of disadvantaged children.</p>
2.	To critically analyse portrayal of men and women in popular culture	<p>Analysing data / photos / descriptions / narratives/ reports on representation of gender in media and its implications</p> <p>Watch TV advertisement and movies and them have discussion</p>	<p>Prepare a multimedia presentation to illustrate aspects of gender in different media</p> <p>Prepare an introductory brochure on concerns of selected groups to be used by any organization intending to work with women from different social groups.</p> <p>Write review of a selected film</p>
3.	To understand the theoretical framework that explains gender in society	<p>Read journal articles, books to collate information on different theoretical perspectives</p> <p>Lecture on different theories of feminism</p>	<p>Prepare a review paper highlighting thinkers, activists, scholars in the area.</p> <p>Comment on a selected article's theoretical perspective</p>

### WOMEN AND GENDER STUDIES PRACTICAL

**Maximum Marks: 100**

**Duration: 3 Hrs**

#### Course Objectives:

To be aware of differences in gender and the manner in which it creates differences, disadvantage and exclusion and the need for equity.

#### Course Learning Outcomes:

Student will be able to-

1. Describe gender and explore representation of men and women in diverse selection of texts – literary and visual
2. Identify cultural assumptions about being men and women in a society
3. Apply the understanding of concepts such as equity and rights
4. Acquire proficiency in developing frameworks of analyses and documentation.

## CONTENT

## PERIODS

### **UNIT I Using several and appropriate methods find out from multi generation 8**

- Gender roles and gendered division of labour
- Socialization for gender and gender inequality

### **UNIT II Review of images of men and women 16**

- Collect and analyse images of Women in media, Sports, Arts, Entertainment and Fashion Industry
- Review of songs, stories, mythology and other texts to understand representation of gender

### **UNIT III Understand gender positioning through films/documentaries 8**

- Textual analysis of Film : The Lady -which portrays the democratic movement led by Nobel laureate Aung Sang Suyi in Myanmar
- From "Shoulder to Shoulder," program 5, "Outrage!, Not for Ourselves Alone part I, II
- Black feminism- The Colors of Love, Accomplished Women: Feminist Movement 1970s Documentary - Part 1 (1974)
- Film/documentary of choice

### **UNIT IV Analysis and Review of selected issues 16**

- Analysis of gender based indices for understanding the status of women in society
- Women's occupational preferences and the factors responsible for it
- Analysing occupational choices constraining their opportunity structure
- Develop a profile for feminisation of occupations
- Review of Mass Sterilization camps, Impact of Contraceptives and Assisted Reproductive Technology on Women, Health issues of adolescent girls
- Feministic review of National Health Policy and Programmes
- Politics of Masculinity and Power

### **Suggested Readings:**

- Agosin, M. (2003). *Women, Gender and Human Rights: A Global Perspective* (1st ed.). Rajasthan, India: Rawat.
- De Beauvoir, S. (1983). *The Second Sex*. Harmondsworth: Penguin.
- Fischer, A.H. (2000). *Gender and Emotion: Social Psychological Perspectives*. New York: Cambridge University Press.
- Chaudhuri, M. (2005). *Feminism in India: Issues in contemporary Indian Feminism*. New Delhi: Zed books.
- Andersen, M.L. (2003). *Thinking about Women: Sociological Perspectives on Sex and Gender*. Sixth Edition. New York: Macmillan Publishing Company.
- Mead, M. (1950). *Male & Female*. New York: Harper Perennial.
- Sharma, K. (1985). *Gender concerns and Development*. New Delhi: Centre for Women's Development Studies
- Myra, M.F., Lorber, J., & Hess, B.B. (Ed.) (1999). *Revisioning Gender: The Gender Lens*. London: Sage.

- Biswal, T. (2006). *Human Rights, Gender and Environment*. New Delhi: Viva Books.
- Kishwar, M. (1999). *Off the Beaten Track: Rethinking Gender Justice for Indian Women*. New Delhi: OUP.
- Agnes, F. (1999). *Law and Gender Inequality: The Politics of Women's Rights in India*. Oxford University Press.
- Saika, N. (2008). *Indian Women: A Socio-Legal Perspective*. New Delhi: Serials Publication.
- Bhasin, K. (2000). *Understanding Gender*. New Delhi: Kali For Women.
- Goel, A., Kaur, A., & Sultana, A. (2006). *Violence against Women: Issues and Perspectives*. New Delhi: Deep & Deep.
- Sohoni, K.N. (1994). *Status of Girls in Development Strategies*. New Delhi: Haranand Publications.
- Menon, R. & Bhasin, K. (1998). *Borders and Boundaries: Women in India's Partition*. New Delhi: Kali for Women.
- Bhasin, K. (1993). *What is Patriarchy?* New Delhi: Kali for Women.

## **PARENTING AND EARLY INTERVENTION THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

### **Course Objective:**

To provide knowledge in parenting for care of high risk child from birth to 3year to enhance development and prevent delays

### **Course Learning Outcomes:**

1. To recognize typical and atypical development during ages birth- 3 years
2. To theoretically understand the development of norms and recognize delays.
3. Increase ability to support the family and strengthen the parent's ability to support his/her child's development.
4. Increase ability to develop intervention strategies based on a child's individual needs.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Parenting**

**8**

- Development in culture & context
- Challenges of contemporary parenting
- Understanding developmental delays in domains
- Challenges of learning child development through google searches

#### **UNIT II: High Risk infants and toddlers**

**12**

- Neurobiological basis of early risk
- Parental Risk factors
- Child Risk factors
- Environmental Risk Factors
- Protective factors in high-risk infant cases
- Abuse and neglect specific to infants and young children
- Guidelines for child protection practice

#### **UNIT III: Care of the High Risk newborn and family**

**12**

- Risk factors
- Assessment

- Intervention
- Protection from Infection, Hydration, Nutrition, Feeding Resistance, Skin Care, Administration of Medications, Developmental Outcome, Facilitating Parent-Infant Relationships

#### **UNIT IV: Early Intervention Programmes for infants with developmental delays 16**

- Macro level plan of action- awareness, screening training for parents, documentation
- Micro level- Education and counseling service for parents, assessment techniques and therapies, create awareness about various legal provisions and government schemes for children and convergence of educational service & therapies

#### **Suggested Readings:**

- Branjerdporn, G., Meredith, P., Strong, J., & Garcia, J. (2017). Associations between maternal-foetal attachment and infant developmental outcomes: A systematic review. *Maternal and Child Health Journal*, 21(3), 540-553.
- Child protection intervention with high-risk infants - <https://www.communities.qld.gov.au/resources/childsafety/practice-manual/intervention-with-high-risk-infants.pdf>
- Copeland L., Parekh S. (2018) Quality Coordinated Health Care for the High-Risk Infant: The Evolving Concept of the Medical Home. In: Needelman H., Jackson B. (eds) *Follow-Up for NICU Graduates. Promoting Positive Developmental and Behavioral Outcomes for At-Risk Infants* Springer, Cham
- Davidov, M., & Grusec, J. E. (2006). Untangling the links of parental responsiveness to distress and warmth to child outcomes. *Child Development*, 77(1), 44-58.
- Einav, M., Levi, U., & Margalit, M. (2012). Mothers' coping and hope in early intervention. *European Journal of Special Needs Education*, 27(3), 265–279.
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- <http://parentintheknow.com/wp-content/uploads/2017/04/Parent-in-the-Know-Research-Basis-for-Assessments-and-Reports.pdf>
- <https://files.eric.ed.gov/fulltext/EJ843624.pdf>
- Luz, R., George, A., Vieux, R., & Spitz, E. (2017). Antenatal determinants of parental attachment and parenting alliance: How do mothers and fathers differ?. *Infant Mental Health Journal*, 38(2), 183-197.
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- Pisoni, C., Garofoli, F., Tzialla, C., Orcesi, S., Spinillo, A., Politi, P. & Stronati, M. (2014). Risk and protective factors in maternal–fetal attachment development. *Early Human Development*, 90, S45-S46.
- Potharst, E. S., Aktar, E., Rexwinkel, M., Rigterink, M., & Bögels, S. M. (2017). Mindful with your baby: Feasibility, acceptability, and effects of a mindful parenting group training for mothers and their babies in a mental health context. *Mindfulness*, 1-15.
- Pridham, K. F., & Chang, A. S. (1989). What Being the Parent of a New Baby is Like: Revision of an instrument. *Research in Nursing & Health*, 12(5), 323-329.

- Rode, J. L., & Kiel, E. J. (2016). The mediated effects of maternal depression and infant temperament on maternal role. *Archives of Women's Mental Health*, 19(1), 133-140.
- Rossen, L., Hutchinson, D., Wilson, J., Burns, L., Allsop, S., Elliott, E. J. & Ainsworth, M. D. (2017). Maternal bonding through pregnancy and postnatal: Findings from an Australian Longitudinal Study. *American Journal of Perinatology*, 34(08), 808-817
- Singh, M. 8<sup>th</sup> Ed. (2017). *Care of the New Born*, CBS Publishers & Distributors
- Winston, R., & Chicot, R. (2016). The importance of early bonding on the long-term mental health and resilience of children. *London Journal of Primary Care*, 8(1), 12-14.

### Teaching plan

- **Week 1:** Development in culture & context; Challenges of contemporary parenting
- **Week 2:** Understanding developmental delays in domains; Challenges of learning child development through google searches
- **Week 3:** Neurobiological basis of early risk; Parental Risk factors; Child Risk factors
- **Week 4:** Environmental Risk Factors; Protective factors in high-risk infant cases
- **Week 5:** Abuse and neglect specific to infants and young children; Guidelines for child protection practice
- **Week 6:** Risk factors; Assessment
- **Week 7:** Intervention
- **Week 8:** Protection from Infection, Hydration, Nutrition, Feeding Resistance, Skin Care, Administration of Medications, Developmental Outcome, Facilitating Parent-Infant Relationships
- **Week 9:** Macro level plan of action- awareness, screening
- **Week 10:** Training for parents, documentation
- **Week 11:** Micro level – Education and counselling services for parents, assessment techniques and therapies
- **Week 12:** Create awareness about various legal provisions and government schemes for children and convergence of educational services & therapies

### Facilitating the achievement of course learning outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	To recognize typical and atypical development during ages birth- 3 years	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on area</li> <li>• Lecture &amp; discussion specific to areas</li> <li>• Audio visual resources</li> </ul>	Classroom presentation and discussions
2.	To theoretically understand the development of norms and recognize delays.	<ul style="list-style-type: none"> <li>• Review academic writings and research studies</li> </ul>	Written assignments on selected topics
3.	Increase ability to	<ul style="list-style-type: none"> <li>• Lecture on domains</li> </ul>	Group/ individual

	support the family and strengthen the parent's ability to support his/her child's development.	of development and stages <ul style="list-style-type: none"> <li>• Individual student presentations with inputs from teacher and fellow students</li> </ul>	presentations on select cases
	Increase ability to develop intervention strategies based on a child's individual needs	<ul style="list-style-type: none"> <li>• Read journal articles, books</li> <li>• Examine select readings</li> <li>• Invited expert speakers on select areas</li> </ul>	Group/ individual presentations on domains and concepts  Class test on areas covered

### **PARENTING AND EARLY INTERVENTION PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Learning Objectives:**

To provide skills in assessing, planning, implementing and documenting early intervention for infants and toddlers at risk and with developmental delays and knowledge for communicating the same to parents within communities.

**Course Learning Outcomes:**

- 1 To assess, plan and implement early intervention for infants and toddlers at risk & with developmental delays.
- 2 To impart techniques of working with families and community for effective intervention.
- 3 To develop competency in report writing, record maintenance and communication.
- 4 To facilitate and integrate the children into community programmes and family guided intervention.

**CONTENT**

**PERIODS**

<b>UNIT I:</b> Assessment and Evaluation methods	20
<ul style="list-style-type: none"> <li>• In case history taking and documentation</li> <li>• Observation of infants and activity analysis methods</li> <li>• Comprehensive need assessment and outcomes</li> <li>• Developmental assessments tools and techniques</li> <li>• Therapeutics Assessment, Intervention and Evaluation</li> <li>• Documentation and Report writing</li> </ul>	
<b>UNIT II:</b> Communication and Awareness building methods	8
<ul style="list-style-type: none"> <li>• Family</li> <li>• Schools</li> <li>• Communities</li> </ul>	
<b>UNIT III:</b> Intervention Activities	12
<ul style="list-style-type: none"> <li>• Individualised Early Intervention Programming</li> <li>• Play material for domain specific development</li> <li>• Activities for integration within communities</li> </ul>	

- Support group development

**UNIT IV:** Multidisciplinary, interdisciplinary and transdisciplinary approaches, 8

- 1 Effective individual, team and multi-agency approaches to Early Intervention.
- 2 Skills in collaboration with other disciplinary professionals as well as family members through case study approach of early intervention for a high risk infant.

**Suggested Readings:**

- Child protection intervention with high-risk infants - <https://www.communities.qld.gov.au/resources/childsafety/practice-manual/intervention-with-high-risk-infants.pdf>
- <http://parentintheknow.com/wp-content/uploads/2017/04/Parent-in-the-Know-Research-Basis-for-Assessments-and-Reports.pdf>
- <https://files.eric.ed.gov/fulltext/EJ843624.pdf>
- Singh, M. 8<sup>th</sup> Ed. (2017).Care of the New Born, CBS Publishers & Distributors

**SOCIOLOGY OF CHILDHOOD  
THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

**Course Objective:**

To use sociological framework for understanding of significant issues and concerns in Human Development and conceptualize contemporary changing family settings, social structures and processes

**Course Learning Outcomes:**

The students will be able to-

1. Explain the sociological framework for understanding of significant issues and concerns in childhood
2. Explain theoretical and analytical framework for contemporary changing family settings, social structures and processes
3. Identify the role of culture, social structure and family in childhood

**CONTENTS**

**PERIODS**

<b>Unit I: Childhood in different socio-cultural setting</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Cultural dimension of children and childhood</li> <li>• Children’s peer cultures</li> <li>• Children’s agency in their everyday life</li> <li>• Social problems experienced by children</li> </ul>	
<b>Unit II Theoretical perspectives</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Social theories of childhood</li> <li>• Socially constructed nature of childhood</li> <li>• Ethnographic studies of childhood in different social settings</li> </ul>	
<b>Unit III: Childhood in Contemporary families</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Social change and child rearing</li> <li>• Different issues that concern contemporary families</li> <li>• Divorce, remarriage and single parent families</li> </ul>	
<b>Unit IV: Childhood and Society</b>	<b>12</b>

- Historical, economic global aspects of childhood
- Cultural and political significance of childhood
- Research and future of children and childhood

### **Suggested Readings:**

- Childhood Matters by Bernard Van Leer Foundation
- Kretzmann, J.P. & McKnight, J.L. (1993). *Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets* Paperback ACTA Publications.
- Hart, R.A. (1997). *Children's Participation: The Theory and Practice of Involving Young Children in Community Development and Environmental Care*.
- Dube, L. (1988). *On the construction of Gender: Socialization of Hindu Girls in Patrilineal India*, *Economic and Political Weekly*, WS-11-19, volume 23.
- Gooptu, N. (1997). *The Urban Poor in Early Twentieth Century, Uttar Pradesh*. *Modern Asiatic Studies* 31(4): 879 – 918.
- Lewis, O. (1961). *The Children of Sanchez: Autobiography of a Mexican Family*. Harmondsworth: Penguin Books.
- Corsaro, William A. (1997). *The Sociology of Childhood*. Pine Forge Press: Sage
- Madan, T.N. (1997). *Modern Myths and Locked Minds*. London: Oxford University Press.
- Srinivas, M.N. (2002). *The Field Worker and the Field*. London: Oxford University Press.
- Montgomery, H. (Ed.). (2013). *Local childhood, global issues (2nd Ed.)*. UK: The Policy Press.
- Munford, R. and Sanders, J. (Eds.) (2003). *Making a Difference in Families: Research and Applications in India*. New Delhi: Sage.
- *Research that Creates Change*. New South Wales, Australia: Allen & Unwin.
- Saraswathi, T. S. (Ed.), *Culture, Socialization and Human Development: Theory*,
- Saraswathi, T.S., Menon. S., & Madan, A. (Eds.). (2018). *Childhood in India: Traditions, trends and transformations*. London: Routledge.
- Sriram, R (2014). *Engaging in Social Intervention (For Learners) Volume I*. New Delhi: Concept Publishing.
- Sriram, R (2014). *Engaging in Social Intervention (For Mentors) Volume II*. New Delhi: Concept Publishing.
- Ungar, M. (Ed.). (2012). *The social ecology of resilience: A handbook of theory and practice*. NY: Springer
- Winnicott, D.W. (1964). *The child, the family and the outside world*. England: Penguin.

### **Teaching Plan:**

- **Week 1:** Cultural dimension of children and childhood; Children's peer cultures
- **Week 2:** Children's agency in their everyday life
- **Week 3:** Social problems experienced by children
- **Week 4:** Social theories of childhood
- **Week 5:** Socially constructed nature of childhood
- **Week 6:** Ethnographic studies of childhood in different social settings
- **Week 7:** Social change and child rearing
- **Week 8:** Different issues that concern contemporary families
- **Week 9:** Divorce, remarriage and single parent families
- **Week 10:** Historical, economic global aspects of childhood
- **Week 11:** Cultural and political significance of childhood

- **Week 12:** Research and future of children and childhood

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Explain the cultural dimension of children and childhood and children's peer culture along with an understanding of children's agency, social problems experienced by children in their everyday life.	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on cultural dimension of childhood</li> <li>• Lecture &amp; discussion specific to children's agency, social problems and peer culture</li> <li>• Audio visual resources</li> </ul>	Classroom presentation and discussions
2.	To critically analyse the theoretical perspective of childhood	<p>Lecture on socially constructed nature of childhood and theoretical foundations of childhood in different settings.</p> <p>Relevant books, papers – students read, collate and make presentations on selected themes.</p> <p>Invited expert speakers</p>	<p>Prepare a review paper highlighting thinkers and scholars in the area.</p> <p>Comment on theoretical perspectives</p> <p>Written assignments on selected topics related to theories of childhood.</p>
3.	To identify the role of child rearing and other life situations in the construction of childhood	<p>Students share aspects of their childhood and discuss the differences they experienced and noticed – and how these helped them (or didn't)</p> <p>Films and audio-visual input</p>	<p>Group/ individual presentations on select successful ECCE approaches and or programs</p> <p>Class test on areas covered</p>
4	To critically analyse the concerns related to historical, political and economic aspects of childhood	Analysing data / photos / descriptions / narratives/ reports on different children's groups and geographies to discuss	Prepare a multimedia presentation to illustrate aspects of childhood

		how childhoods differ for children and the implications of this for education as well other programmes to address children's needs	
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## SOCIOLOGY OF CHILDHOOD PRACTICAL

**Maximum Marks: 100**

**Duration: 3 Hrs**

### **Course Objective:**

To use sociological framework for understanding of significant issues and concerns in childhood and conceptualize the impact contemporary changing family settings, social structures and processes

### **Course Learning Outcomes:**

The students will be able to

1. Explain the sociological framework for understanding of significant issues and concerns in childhood
2. Explain theoretical and analytical framework for contemporary changing family settings, social structures and processes
3. Identify the role of culture, social structure and family in childhood

### **CONTENTS**

### **PERIODS**

#### **Unit I: Profile of a young child using an ethnographic approach 24**

- Through appropriate methods, notes and field records using an ethnographic approach understand life of a child in one selected social setting
- Understand the role of family in the child's life
- Explore peers and other members of society that constitute children's worlds

#### **Unit II: Study print resources/visual media to understand children's lives 12**

- Newspapers reports and news with reference to children
- Study portrayals of children's lives in television, computer games/sites and films
- Visit and record from Bookstore / library/ book stores availability of books/magazines in terms of appropriateness and representation of children in Global context /Indian languages/cultures/ and study content and reflect on lives of children

#### **Unit III: Children in social world 12**

- Develop suitable tools ( checklist/observation guide, interview) to study children in different circumstances and social change and child rearing
- Using suitable method (review of literature/archival data) study historical, economic and political aspects of childhood

## CHILDHOOD AND ADOLESCENCE ACROSS ECOLOGICAL SETTINGS THEORY

**Maximum Marks: 100**

**Duration: 3 Hrs**

**Course Objectives:**

To recognize the theoretical perspective and its feasibility on specific features of childhood and adolescence as distinct stages of development.

**Course Learning Outcomes:**

The student will be able to:

1. Extend their knowledge on understanding of social processes during childhood and adolescence
2. Able to speak about the experiences of childhood and adolescents in different parts of the world
3. Gain knowledge of the variations in child rearing practices and socialisation and significant of a specific culture
4. Acquire an understanding on linkage between policy and programmes for children and adolescents in Indian context

**CONTENTS****PERIODS**

<b>UNIT I:</b> Introduction to childhood and adolescence	10
<ul style="list-style-type: none"><li>• Defining childhood as a distinct stage</li><li>• Adolescence: Special features and significance</li><li>• Formative adulthood: Adolescence and youth as a period of social renewal</li><li>• Cultural nature of human development</li></ul>	
<b>UNIT II:</b> Child rearing and socialisation	10
<ul style="list-style-type: none"><li>• Cultural diversity in child rearing</li><li>• Cultural practices for the arrival and care of children</li><li>• Socialisation: The transformation of a child into a member of society</li><li>• Dynamic interaction between individuals and society</li></ul>	
<b>UNIT III:</b> Childhood and adolescence in different cultures	18
<ul style="list-style-type: none"><li>• Child care and socialisation in different cultures</li><li>• Historical studies of childhood and adolescence</li><li>• Moving between local and global understandings of childhood and adolescence</li></ul>	
<b>UNIT IV:</b> Childhood and adolescence in Indian communities	10
<ul style="list-style-type: none"><li>• The child in India: History and culture</li><li>• Indian adolescence: Diversity and uniqueness</li><li>• Contemporary status of children and adolescents in India</li><li>• Implications for policy and planning for children with social disadvantage</li></ul>	

**Suggested Readings:**

- Bumiller, E. (1990). *May You be a Mother of a Hundred Sons*. New Delhi: Penguin.
- Chaudhary, N. (2009). *Families and Children in Poverty: Objective Definitions, Subjective Lives*. In A. C. Bastos & E. P. Rabinovich (Ed.) *Living in Poverty: Developmental Poetics of Cultural Lives*. Charlotte, NC: Information Age.
- Matsumoto, D. (Ed.). (2001). *The Handbook of Culture and Psychology*. New York: Oxford University Press.
- Schlegel, A. & Barry, H. (1991). *Adolescence: An Anthropological Enquiry*. New York: The Free Press.

- Harkness, S., & Super, C. (1996). Parents' Cultural Belief Systems: Their Origins, Expressions and Consequences. New York: The Guilford Press.
- Trawick, M. (2003). The Person Behind the Family. In V. Das (Ed.), The Oxford Companion to Sociology and Social Anthropology (Vol. 2, pp. 1158-1178). New Delhi: Oxford University Press.

### Teaching Plan:

- **Week 1:** Defining childhood as a distinct stage, Adolescence: Special features and significance
- **Week 2:** Formative adulthood: Adolescence and youth as a period of social renewal
- **Week 3:** Cultural nature of human development, Cultural diversity in child rearing
- **Week 4:** Cultural practices for the arrival and care of children, Socialisation: The transformation of a child into a member of society
- **Week 5:** Dynamic interaction between individuals and society
- **Week 6:** Child care and its significance in different cultures
- **Week 7:** Socialisation in different cultures
- **Week 8:** Historical studies of childhood and adolescence
- **Week 9:** Moving between local and global understandings of childhood and adolescence
- **Week 10:** The child in India: History and culture
- **Week 11:** Indian adolescence: Diversity and uniqueness, Contemporary status of children and adolescents in India
- **Week 12:** Implications for policy and planning for children with social disadvantage

### Facilitating the achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	The student will be able to extend their knowledge on understanding of social processes during childhood and adolescence	<p>Self directed: Read journal articles, books to bring together information on childhood, adolescence and formative adulthood</p> <p>Lecture on significance of childhood years which follows adolescence and adulthood</p> <p>Present research societal standpoint on the same</p>	<p>Comment on prominent practices of childhood through a historical version</p> <p>Present arguments for and against role of socialization folklore in children's lives</p> <p>Identify and discuss social practices which relate to childhood and its significance</p> <p>Review and discuss change in depiction of childhood and socialization practices</p>

		<p>Discussion on socialization of the same in diverse cultures and its significance in contemporary times</p> <p>Lecture on significantly connecting socialization practices to understand childhood as a 'conception'</p>	<p>in Indian history</p> <p>Comment on how childhood can be comprehend as 'concept' in society</p>
2.	The student will be able to speak about the experiences of childhood and adolescents in different parts of the world	Power point presentations on live through experiences of childhood and adolescence in culturally varied societies.	Critically analyse one journal article on each of these aspects (to be done collectively by the students)
3.	The student will be gain knowledge of the variations in child rearing practices and socialisation and significant of a specific culture	Paper presentation of researches on child rearing practices and significance of socialisation patterns within different part of societies	<p>Discuss current researches, its applicability and ethical considerations in their respective societies</p> <p>Enlist and discuss contemporary ground-breaking socialization patterns of culture appropriate to one's society</p>
4.	The student will be acquire an understanding on linkage between policy and programmes for children and adolescence in Indian context	Project report on selected social processes using secondary data on policy and programmes present for children and adolescence in Indian society	Peer evaluation of project report

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## CHILDHOOD AND ADOLESCENCE ACROSS ECOLOGICAL SETTINGS PRACTICAL

**Maximum Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To identify the realistic viewpoint and its viability on features of childhood and adolescence as distinctive phases of development.

### **Course Outcomes:**

The student will be able to-

1. Develop an understanding on childhood as a 'concept'
2. Able critically evaluate the experiences of adolescence and adulthood within Indian society
3. Put on knowledge to gather information on child rearing practices and socialisation
4. Develop an understanding on and create awareness about programmes for children and adolescence in community

### **Content**

### **Periods**

- Using mixed and appropriate methods for studying children and childhood in society. 8
- Document concepts of childhood, across cultures and context from primary and secondary sources and relevant findings through analysis of departmental dissertations. 10
- Carry out case profile/survey on the following: 16
  1. Child rearing practices in different regions of Indian society
  2. Adolescence as a distinct stage with supportive examples
  3. Contemporary societal perspective on childhood and adolescence
- Design a social experiment on emphasizing contemporary conditions, problems and its relevance in human development (using primary and secondary sources of data) 8  

or

 On changing Indian family with an analysis of the past, present and future focusing on diversity of India. 8

## DISSERTATION/ PROJECT WORK PRACTICAL

**Maximum Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To develop skills in conducting a research study/ working in a project and to learn the process of writing a dissertation/ project report.

**Course Learning Outcomes:**

Student will be able to-

- Know the practical aspects of, collecting data/ project work
- Evaluate, select and use appropriate strategies for reduction, analysis and presentation of data collected during research process/ project work
- Suitably illustrate data/ insights using various graphical and other methods.
- Prepare a dissertation document/ project report based on research process/ project work done.

Students will be given an option of doing either

A) Dissertation or B) Project work in a chosen area congruent to their discipline/ field of study.

The work will be an original effort.

## **SEMESTER IV**

**SEMESTER IV**

<b>Number of core/elective courses</b>	<b>Credits in each core/elective course</b>			
<b>Courses</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
<b>HDCSCC 15</b> Dissertation/Experiential Learning Project		<b>4</b>		<b>4</b>
<b>HDCSEC 3 &amp; 3 (B)</b> <ul style="list-style-type: none"><li>• SOCIAL PSYCHOLOGY FOR HUMAN DEVELOPMENT</li><li>• DEVELOPMENT IN ADULTHOOD</li></ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSEC 4 &amp; 4 (B)</b> <ul style="list-style-type: none"><li>• ORGANISATION AND MANAGEMENT OF PROGRAMMES FOR CHILDREN</li><li>• CHILDREN AND MEDIA</li></ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>HDCSEC 5 &amp; 5 (B)</b> <ul style="list-style-type: none"><li>• CHILD AND ADOLESCENT WELLBEING</li><li>• COUNSELLING FOR CHILD DEVELOPMENT</li></ul>	<b>4</b>	<b>2</b>		<b>6</b>
<b>TOTAL NUMBER OF CREDITS</b>	<b>22</b>			

# SOCIAL PSYCHOLOGY FOR HUMAN DEVELOPMENT THEORY

**Maximum Marks: 100**

**Duration: 3 Hrs.**

## **Course Objectives:**

To study the principles and processes of Social Psychology; to gain an understanding about the origins of social behaviour and interactional processes; and to acquire knowledge about social processes.

## **Course Learning Outcomes:**

Students will be able to-

1. Define Social Psychology and delineate its fundamental concepts
2. Explain group dynamics and individual behaviour in varied contexts
3. Describe and analyse the different components of social behaviour
4. Develop skills for practical application and design of social experiments

## **CONTENTS**

## **PERIODS**

### **UNIT I: Introduction to Social Psychology, social interaction and social influence** **10**

- Basic concepts in Social Psychology
- Fundamental principles of social behaviour and group dynamics
- Formation of social self, self concept, self esteem, identity
- Different types of groups: Peers, family, society, community, others

### **UNIT II: Group dynamics and the individual** **15**

- Leadership, followership and group behaviour
- Conformity and compliance
- Social communication, control, discipline, persuasion and social influence
- Prejudice, ethnocentrism, stereotypes and the fundamental attribution error

### **UNIT III: Selected aspects of social behaviour** **15**

- Attitudes, prejudice, beliefs and values
- Prosocial behaviour: Altruism, cooperation, empathy, sympathy, friendship and cohesion
- Antisocial behaviour: Violence and aggression towards individuals and groups
- The application of Social Psychology to the understanding of psychopathology
- Creative social experiments

### **UNIT IV: Project** **8**

Prepare a report on any one of the social processes like leadership, social influence, prejudice, stereotyping, or any other.

## **Suggested Readings:**

- Chaudhary, N. (2009). Social dynamics in complex family systems and its study. In J. Valsiner, P.C.M. Molenaar, & M.C.D. P. Lyra (Eds.), *Dynamic process methodology in Social and Developmental Sciences*. (p.377-399). New York: Springer.
- Dalal, A. K., & Misra, G. (2001). *New directions in Indian Psychology*. Vol.1. New Delhi: Sage.
- Harre, R. (1979). *Social being: A theory for Social Psychology*. Oxford: Basil Blackwell.
- Leung, K., Kim, U., Yamaguchi, S., Kashima, Y. (1997). *Progress in Asian Social Psychology, Vol.1*. Singapore: John Wiley & Sons.

- Palmer, S. (Ed.). (2002). *Multicultural counselling: A reader*. London: Sage.
- Rao, K.R., Paranjpe, A.C. & Dalal, A.K. (2008). *Handbook of Indian Psychology*. New Delhi: Cambridge University Press.
- Reiss, S. (2008). *The normal personality: a new way of thinking about people*. Cambridge: Cambridge University Press.
- Roland, A. (1988). *In search of the self I India and Japan*. Princeton, NJ: Princeton University Press.
- Sharma, D. (Ed.). (2003). *Childhood, family and sociocultural change in India: Reinterpreting the inner world*. New Delhi: Oxford University Press.

### Teaching Plan:

- **Week 1:** Basic concepts in Social Psychology; Fundamental principles of social behaviour and group dynamics
- **Week 2:** Formation of social self, self concept, self esteem, identity; Different types of groups: Peers, family, society, community, others
- **Week 3:** Leadership, followership and group behaviour; Conformity and compliance
- **Week 4:** Social communication, control, discipline, persuasion and social influence
- **Week 5:** Prejudice, ethnocentrism, stereotypes and the fundamental attribution error
- **Week 6:** Attitudes, prejudice, beliefs and values
- **Week 7:** Prosocial behaviour: Altruism, cooperation, empathy, sympathy, friendship and cohesion
- **Week 8:** Antisocial behaviour: Violence and aggression towards individuals and groups
- **Week 9:** The application of Social Psychology to the understanding of psychopathology
- **Week 10:** Creative social experiments
- **Week 11-12:** Prepare a report on any one of the social processes like leadership, social influence, prejudice, stereotyping, or any other.

### Facilitating the achievement of course learning outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Define Social Psychology and delineate its fundamental concepts	Basic textbooks on Social Psychology; looking for differences in Psychology, Social Psychology, Personality Psychology and Cultural Psychology	Collect examples of concepts studied in Social Psychology Make a presentation of the same in class
2.	Explain group dynamics and individual behaviour in varied contexts	Power point presentations on selected listed aspects of group dynamics and individual behaviour	Critically analyse one journal article on each of these aspects (to be done collectively by the students)

3.	Describe and analyse the different components of social behaviour	Presentation of experimental research on selected aspects of social behaviour	Discuss research design, applicability and ethical considerations of selected social experiments  Enlist and discuss contemporary innovative social experiments
4.	Develop skills for practical application and design of social experiments	Project report on selected social processes using secondary data	Peer evaluation of project report

### **SOCIAL PSYCHOLOGY FOR HUMAN DEVELOPMENT PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

**Course Objective:**

To get acquainted with Social Psychology theories in practice, and carry out ethical social experiments/research.

**Course Learning Outcomes:**

Students will be able to-

1. Evaluate as well as design Social Psychology experiments
2. Identify strategies to mediate group dynamics and individual behaviour
3. Create and implement innovative social experiments

**CONTENTS**

**PERIODS**

- Identify and describe any ten influential Social Psychology Experiments. 4
- Document concepts in Social Psychology, and their study methods and relevant findings through analysis of students' dissertations available to you. 4
- Carry out focused group interviews/survey on the following: 8
  1. Women leaders/workers in corporate sector: stereotypes and prejudice
  2. Mob violence: social perceptions
  3. Ageism
  4. Social networking and communication platforms: participation of youth in
  5. selected materially restricted settings
  6. Contemporary politics: emergent themes
  7. Mental illness and Depression: age and context variables
- Design a social experiment to bring about change in people's attitudes in any of the above listed areas. As part of the experiment, prepare a communication aid containing socially relevant messages fit for dissemination among concerned groups/general public. 8

## **DEVELOPMENT IN ADULTHOOD THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

### **Course Objective:**

To study theoretical constructs of adulthood and aging across the disciplines of life span developmental psychology, sociology, anthropology, history and other social sciences.

### **Course Learning Outcomes:**

1. The students will develop the theoretical understanding of adulthood development
2. The students will apprehend knowledge of the critical issues that need to be addressed in adulthood
3. The student will be trained about the diverse patterns of adulthood relationship across culture
4. The student would build up knowledge on the theoretical understanding on being old/ age

### **CONTENT**

### **PERIODS**

#### **UNIT I: Understand adulthood through**

12

- Theoretical perspective on adulthood: Life-histories theories, Psycho-social theories, Evolutionary theories, Moral development theories, Neuro-endocrine immunological theories
- Theories- theory of ageing and longevity, wear and tear theories, disengagement theory, activity theory and continuity theory
- Understanding adulthood in cultural context, Developmental tasks, Meaning of adulthood, Social dimensions, Biological dimension, Emotional dimensions, Legal dimensions
- Transition to adulthood: Individual, Family and Career perspective

#### **UNIT II: Early Adulthood**

10

- Physical development: Psychological & physiological changes, Sensory and Psycho-Motor functioning, Health status, Intellectual, Moral and personality development, Intimacy & Sexuality
- Cognitive development: Development of post formal thoughts, Transformation in the structure of thought, Transformation in mental abilities
- Social & Emotional development: Adult attachment, Family dynamics and life courses, Diversity of adult standard of living, Development in vocational skills

#### **UNIT III: Middle adulthood**

10

- Physical development: Psychological & physiological changes, Sensory and Psycho-Motor functioning, Health status, Intellectual, Moral and personality development, Adaptation to the midlife confronts
- Cognitive development: Wisdom and adulthood
- Social & Emotional development: Experience of midlife, the subjective experience of growing older, single life, Marriage and Marital adjustment, Non-parenthood and Parenthood, Divorce, Remarriage, Changes in self and personality traits, Professional life

#### **UNIT IV: Late adulthood**

10

- Physical development: Biological and Physiological aspects of being old, Psychological and sociological aspects of being old, Sensory and Psycho-Motor functioning, Health status, Intellectual, Moral and personality development, Health, Fitness and Disability

- Cognitive Development: Transformation in memory and forgetting in adulthood
- Social & Emotional development: Work and leisure, Retirement, Changing roles and responsibilities: grandparenthood and Great grand parenthood, widowhood/single hood, Living arrangements, care-giving and community support

#### **UNIT V- Aging**

6

- The Life-course perspective on aging, Multiple-domains and definitions of aging, Key concepts and theories in the study of aging, Biological Theories of Aging

#### **Suggested Readings:**

- Austrian, S. S., Developmental theories through the life cycle, New York: Columbia University Press, 2013.
- Berk, L. E. (2009). Development through the lifespan. New Delhi: Pearson Education.
- Bjorklund, B. R. (2015). The Journey of Adulthood (8th ed.). Pearson.
- Feldman, R. S. (1997). Development across life span. New jersey: Prentice hall.
- Kerschner, H. K., & Silverstein, N. M. (2018). Introduction to Senior Transportation Enhancing Community Mobility and Transportation Services. Routledge.
- Papalia, D. E., S. W. Olds and W. Duskin Feldman (2004). Human development. McGraw Hill.
- RICE, F. P. (1998). Human development: A life span approach (3rd ed.). New Jersey: Prentice hall.
- Santrock, J. W. (2010). Lifespan development. McGraw Hill.
- Sasser, J. R., & Moody, H. R. (2018). Gerontology: The Basics. Routledge.

### **DEVELOPMENT IN ADULTHOOD PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

#### **Course Objectives:**

To develop skills of studying Adult and elderly across domains and contexts; to undertake an appraisal of tools and techniques of studying Adult and elderly; to learn skills of engaging with Adult and elderly for a deeper understanding of Human Development

#### **Course Learning Outcomes:**

The student will be able to-

1. To undertake studies of Adult and elderly across domains
2. To identify and use appropriate tools and techniques of studying Adult and elderly
3. To engage and work with Adult and elderly across contexts

#### **CONTENT**

#### **PERIODS**

- |                                                                                                                                                                |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| • Visits to understand institutional provisions for development of Adolescents; school, children homes, rehabilitation centre and skill development provisions | 24 |
| • Practical assignments on stages of development across domains.                                                                                               | 8  |
| • Case study using mixed methods.                                                                                                                              | 8  |
| • Design and implement a project using audio-visual technology to communicate developmental pathways to parents, teachers and students.                        | 8  |

**ORGANIZATION AND MANAGEMENT OF PROGRAMMES FOR CHILDREN  
AND FAMILIES  
THEORY**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To learn theories and methods for assessing persons and contexts for program development/ implementation and understand components of quality programmes for persons in difficult circumstances.

**Course Learning Outcomes:**

The students will be able to:

1. Evaluate persons and contexts for need assessment and programme planning.
2. Undertake work with individuals and groups within communities.
3. Implement strategies in select domains with children and families

**CONTENTS**

**PERIODS**

<b>UNIT I: Orientation to contexts of work and ethics/code of conduct</b>	4
<ul style="list-style-type: none"><li>• Home Environment</li><li>• Schools</li><li>• Communities</li><li>• Institutions for care and protection</li></ul>	
<b>UNIT II: Programme: Nature, purpose and approach</b>	10
<ul style="list-style-type: none"><li>• Institutions and philosophies</li><li>• Services and interventions</li><li>• Purpose, Approaches and activities</li><li>• Sustainability of programmes</li></ul>	
<b>UNIT III: Need Assessment</b>	10
<ul style="list-style-type: none"><li>• Situational Analysis</li><li>• Baseline surveys</li><li>• Resource Mapping</li></ul>	
<b>UNIT IV: Programme planning within the Rights Framework</b>	10
<ul style="list-style-type: none"><li>• Resources</li><li>• Activities</li><li>• Roles and Responsibilities</li><li>• Interpersonal Communication</li><li>• Timelines</li></ul>	
<b>UNIT V: Implementation, Monitoring and Evaluation</b>	10
<ul style="list-style-type: none"><li>• Governmental and non-governmental services</li><li>• Institution based and community based</li><li>• Different ideological approaches</li><li>• Small and large scale interventions</li></ul>	
<b>UNIT VI: Documentation and recording</b>	4

### Suggested Readings:

- Armstrong, K.H., Ogg, J.A., Sundman-Wheat, A.N., & St. John Walsh, A. (2014). Evidence-based interventions for children with challenging behaviors. New York: Springer.
- Childhood Matters by Bernard Van Leer Foundation
- Gumbiner, J. (2003). Adolescent assessment. New Jersey, NJ: Wiley & Sons.
- <https://www.voluntaryworks.org/support/starting-new-organisation>
- Kretzmann, J.P. & McKnight, J.L. (1993) Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets Paperback ACTA Publications.
- Montgomery, H. (Ed.). (2013). Local childhood, global issues (2nd Ed.). UK: The Policy Press.
- Munford, R. and Sanders, J. (Eds.) (2003). Making a Difference in Families: Research and Applications in India. New Delhi: Sage.
- Research that Creates Change. New South Wales, Australia: Allen & Unwin.
- Saraswathi, T. S. (Ed.), Culture, Socialization and Human Development: Theory,
- Saraswathi, T.S., Menon. S., & Madan, A. (Eds.). (2018). Childhood in India: Traditions, trends and transformations. London: Routledge.
- Sriram, R (2014). Engaging in Social Intervention (For Learners) Volume I. New Delhi: Concept Publishing.
- Sriram, R (2014). Engaging in Social Intervention (For Mentors) Volume II. New Delhi: Concept Publishing.
- Ungar, M. (Ed.). (2012). The social ecology of resilience: A handbook of theory and practice. NY: Springer
- Winnicott, D.W. (1964). The child, the family and the outside world. England: Penguin.

### Teaching Plan:

- **Week 1:** Orientation to contexts of work and ethics/code of conduct
- **Week 2:** Institutions and philosophies
- **Week 3:** Services and interventions; Purpose, Approaches and activities
- **Week 4:** Sustainability of programmes; Situational Analysis
- **Week 5:** Baseline surveys; Resource Mapping
- **Week 6:** Programme planning within the Rights Framework Resources, Activities,
- **Week 7:** Roles and Responsibilities, Interpersonal Communication & Timelines
- **Week 8:** Implementation, Monitoring and Evaluation- Governmental and non-governmental services
- **Week 9:** Institution based and community based
- **Week 10:** Different ideological approaches
- **Week 11:** Small and large scale interventions
- **Week 12:** Documentation and recording

### Facilitating the achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
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1.	To be able to evaluate persons and contexts for need assessment and programme planning.	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on area</li> <li>• Lecture &amp; discussion specific to areas</li> <li>• Audio visual resources</li> </ul>	Classroom presentation and discussions
2.	To be able to undertake work with individuals and groups within communities.	<ul style="list-style-type: none"> <li>• Review academic writings and research studies</li> </ul>	Written assignments on selected topics
3.	To be able to implement strategies in select domains with children and families	<ul style="list-style-type: none"> <li>• Lecture on domains of development and stages</li> <li>• Individual student presentations with inputs from teacher and fellow students</li> <li>• Read journal articles, books</li> <li>• Examine select readings</li> <li>• Invited expert speakers on select areas</li> </ul>	Group/ individual presentations on domains and concepts  Class test on areas covered

**ORGANIZATION AND MANAGEMENT OF PROGRAMMES FOR CHILDREN AND FAMILIES  
PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To learn skills and methods for assessing persons and contexts for program development and undertake appropriate intervention strategies in select domains of work with children and families.

**Course Learning Outcomes:**

1. To be able to evaluate persons and contexts for need assessment and programme planning.
2. To be able to undertake work with individuals and groups within communities.
3. To be able to implement strategies in select domains with children and families

## CONTENTS

## PERIODS

- Needs assessment : Survey of individual and group needs 4
- Mapping communities – baseline survey for program development 4
- Profile one individual/family in difficult circumstances 4
- Working with individuals /communities/organisations 4
- Identifying needs and developing activities to undertake with select individuals in communities 8
- Undertake activities within existing organisations for the disadvantaged 8
- Planning intervention strategies 8
- Envisage a small project working with a family or group in collaboration with an existing organisation
- Execute the project with special emphasis on individual/ group empowerment 8

### Suggested Readings:

- Chandra, P (1995). Projects – Planning, Analysis, Selection, Implementation and Review. New Delhi: Tata McGraw
- Community Works Reports by Save the Children Fund
- Hart, R.A. (1997). Children's Participation: The Theory and Practice of Involving Young Children in Community Development and Environmental Care.
- Hildebrand, V. (1984). Management of Child Development Centres, New York: Collier Macmillan
- Jayakaran, R.L. (1996). Participatory Learning and Action: Users' Guide and Manual. Madras: World Vision India
- Sriram, R (2014). Engaging in Social Intervention (For Mentors) Volume II. New Delhi: Concept Publishing.

## CHILDREN AND MEDIA THEORY

**Maximum Marks: 100**

**Duration: 3 Hrs.**

### Course Objectives:

To understand the changing representations of childhood in media; to critique the content, understand its relation and impact on children and to examine research trends in children's evolving relationship with media.

### Course Learning Outcomes:

Students will be able to-

1. Identify forms of media and comprehend their role in the lives of children
2. Understand impact of content on children's thoughts, attitudes and values
3. Critically understand portrayal of children in media
4. Understand methods of creating educational content for children

## CONTENT

## PERIODS

**UNIT I: Different forms of media with reference with children**

**12**

- Definition and different forms of media
- Children's use and benefit from print forms
- Radio and its extensive outreach
- Television medium and its significance in a changing world
- Folk forms of media such- puppetry, drama and art
- Stories, their relevance and changing contexts
- Advances in media technology for accessible medium

**UNIT II: Content, age related understanding and comprehension** **10**

- Linking children's thinking skills to media
- Review of popular materials from different media sources
- Analysis of content in relation to appeal for children
- Identifying materials that engage children's attention
- Balancing entertainment with need for information and stimulation
- Enabling parents and caregivers to appropriately use media for children's growth

**UNIT III: Children in media** **10**

- Children's social presence and notions of childhood in media
- Critical review of using children in media settings in relation to age appropriateness, social significance, stereotypes etc.
- Awareness and understanding of influences of the culture of media on growth and development of child participants
- Enhancing awareness, sensitivity and appropriate care while involving children in media
- Identify components of a media policy and law for children; Protecting children's feelings, emotions and privacy in the world of media

**UNIT IV: Special features for creating content for children's media** **16**

- Understanding historical development of research issues in developing content for children
- Children's perceptions as viewers; Children's sense of identification with media images and self
- Identifying significance of issues such as plurality, gender stereotypes, coexistence of multiple cultures, abilities and age typing
- Importance of educational objectives in media
- Scripting for children- structure and content
- Significance of humour, wonder, logic, simple language and creative content
- Role of formative and summative research in media
- Media literacy and children's expression

**Suggested Readings:**

- Condry, J. (1989). *The Psychology of Television*. Lawrence Erlbaum, Associates, Inc.
- Honig, A. (1983). *Television and young children*. *Young children* 38(4).
- Livingstone, S. (2002). *Young People and New Media*. New Delhi: Sage
- Prakash, S. & Mathur, P. (2000). *Children and TV*. NCERT,
- Real, M. R. (1996). *Exploring Media Culture*. New Delhi: Sage
- Singer D.G. & Jerome L. (2012). *Handbook of Children and Media*. California: Sage.

**Teaching Plan:**

- **Week 1:** Definition and different forms of media; Children's use and benefit from print forms; Radio and its extensive outreach
- **Week 2:** Folk forms of media such- puppetry, drama and art; Stories, their relevance and changing contexts
- **Week 3:** Television medium and its significance in a changing world; Advances in media technology for accessible medium
- **Week 4:** Linking children's thinking skills to media; Review of popular materials from different media sources
- **Week 5:** Analysis of content in relation to appeal for children; Identifying materials that engage children's attention; Balancing entertainment with need for information and stimulation
- **Week 6:** Enabling parents and caregivers to appropriately use media for children's growth; Children's social presence and notions of childhood in media
- **Week 7:** Critical review of using children in media settings in relation to age appropriateness, social significance, stereotypes etc.; Awareness and understanding of influences of the culture of media on growth and development of child participants
- **Week 8:** Enhancing awareness, sensitivity and appropriate care while involving children in media; Identify components of a media policy and law for children; Protecting children's feelings, emotions and privacy in the world of media
- **Week 9:** Understanding historical development of research issues in developing content for children; Children's perceptions as viewers; Children's sense of identification with media images and self
- **Week 10:** Identifying significance of issues such as plurality, gender stereotypes, coexistence of multiple cultures, abilities and age typing; Importance of educational objectives in media
- **Week 11:** Scripting for children- structure and content; Significance of humour, wonder, logic, simple language and creative content
- **Week 12:** Role of formative and summative research in media; Media literacy and children's expression

### Facilitating the achievement of course learning outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
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1.	To identify forms of media and comprehend their role in the lives of children	<p>Self directed: Read journal articles, books to collate information on forms of media</p> <p>Lecture on role of media in the lives of children</p> <p>Present research on use and outreach of radio programs for children</p> <p>Discussion on television as a medium and its significance in contemporary times</p> <p>Lecture on types and impact of digital technology in learning</p>	<p>Comment on prominent forms of media through a historical account.</p> <p>Present arguments for and against role of media in children's lives</p> <p>Identify radio program/s for children with special focus on its content, target group and appeal for children</p> <p>Review and discuss change in portrayal of children in Indian television programs</p> <p>Comment on how digital technology can be used in schools for effective learning</p>
2.	To understand impact of content on children's thoughts, attitudes and values	<p>Review research studies identifying impact of content on children's mind.</p> <p>Lecture on balancing infotainment as well as stimulating content for children</p>	<p>Enlist arguments that determine quality content for children's programs</p> <p>Review few sample materials from different media sources produced for children.</p>
3.	To critically understand portrayal of children in media	<p>Lecture on children's social presence and notions of childhood in media</p> <p>Individual student presentations with inputs from teacher and fellow students</p>	<p>Individual presentation on any one series on children, reflecting on notions of childhood portrayed in media</p> <p>Reviewing the idea of using children in media in context of age appropriateness, social</p>

		Study distinct child-friendly features of media spaces with child participants	significance, and prevalent stereotypes
4.	To understand methods of creating educational content for children	<p>Lecture on history of content development for children. Examine available reports on children's perceptions as viewers and identification with media images.</p> <p>Review importance of having educational objectives in media</p> <p>Lecture on understanding structure and content of scripting for children.</p> <p>Lecture on role and usage of formative and summative research in media</p>	<p>Review content of any one show for children and reflect on issues such as diversity, inclusion, gender stereotypes if any.</p> <p>Present arguments for developing media content that addresses educational objectives with entertainment versus content purely for fun and entertainment</p> <p>Reviewing samples of a few scripts and comment on nature of script, age appropriateness, and cultural factors, inclusion of humour, imagination and logic</p> <p>Review one article based on formative and summative research to understand its function and usage</p>

**CHILDREN AND MEDIA  
PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

### Course Objectives:

To critically engage with media and its representations: selective portrayal, stereotyping and to understand how children participate, respond and react to media

### Course Learning Outcomes:

The students would be able to-

1. Understand children's relationship and response to different media
2. Critically understand course of content development for children
3. Examine contemporary research trends in children's evolving relationship with media
4. Develop frameworks for assessing material for young children

### Contents

### Periods

- Studying children's use of media, interaction with media, response to various media, and ways of identifying child's point of view 4
- Reviewing educational media for children 4
- Visit to a media house to understand content development for children 4
- Develop a skill to understand details of formative research, conducting formative research and its research on script and production 4
- Understanding parental and community perceptions about media and children 2
- Project: prepare a report on **any one** of the following 6
  1. Using normative features of growth and development to review content of children's television programme
  2. Understanding notions of childhood among producers for children's programmes

## CHILD AND ADOLESCENT WELL-BEING THEORY

**Maximum Marks: 100**

**Duration: 3 Hrs.**

### Course Objectives:

To comprehend the theoretical indicators of measuring well-being, which integrates holistic approaches like mental health (mind) and physical health (body) resulting in disease prevention and health promotion

### Course Learning Outcomes:

The student will be able to-

1. To articulate the diverse methods of understanding the construct of 'well-being'
2. To think about developmental psychopathology in childhood and adolescence
3. To gain an understanding of the preventive, promotive and therapeutic approaches to well-being in childhood and adolescence

### CONTENTS

### PERIODS

#### UNIT I: Introduction

- Approaches and models of well-being, including preventive and promotive aspects 10

**UNIT II: Developmental psychopathology in infancy, childhood years 18 and adolescence** 24

- Issues and disorders related to trust, attachment and deprivation in infancy
- Disorders related to sleep, eating, elimination, aggression during preschool years
- Anxiety, school refusal, lying and stealing, behaviour disorders in middle childhood years
- Juvenile delinquency, depression, schizophrenia, substance use disorders, HIV/AIDS, suicidal tendencies, sexual deviance in adolescence

**UNIT III: Approaches to intervention and therapy for well being** 14

- Preventive and promotive approaches
- Individual counselling and family therapy
- Community based and state initiative for well being

**Suggested Readings:**

- Anastasi, A. and Urbina, S. (2003). Psychological Testing. Delhi: Pearson Education.
- Blocher, D.H. ( 2000). Counselling: A Developmental Approach 4th ed.. New York: John Wiley.
- Carson, R.C. and Butcher, J.N. (1992). Abnormal Psychology and Modern Life 9th ed. New York: Harper Collins.
- Fishman, H.C. (1998). Treating Troubled Adolescents: A Family Therapy Approach.
- Luthar, S.S., Burack, J.A., Cicchetti, D. and Weisz, J.R. (Eds.) (1997). Developmental Psychopathology: Perspectives on Adjustment, Risk and Disorder. U.K. Cambridge University Press.
- Magen, Z. (1998). Exploring Adolescent Happiness: Commitment, Purpose and Fulfillment. Thousand Oaks: Sage.
- Porter, L. (2003). Young Children’s Behavior: Practical Approaches for Caregivers and Teachers. London: Paul Chapman.

**Teaching Plan:**

- **Week 1:** Approaches and models of well-being
- **Week 2:** Preventive and promotive aspects
- **Week 3:** Issues and disorders related to trust, attachment and deprivation in infancy
- **Week 4:** Disorders related to sleep, eating, elimination
- **Week 5:** Aggression during preschool years, anxiety, school refusal, lying and stealing
- **Week 6:** Behaviour disorders in middle childhood years
- **Week 7:** Juvenile delinquency, depression, schizophrenia,
- **Week 8:** Substance use disorders HIV/AIDS, suicidal tendencies,
- **Week 9:** Sexual deviance in adolescence Self-perceived health, Longevity
- **Week 10:** Individual counselling and family therapy
- **Week 11:** community based initiative for well being
- **Week 12:** state based initiative for well being

**Facilitating the achievement of course learning outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
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1.	The student will be able to articulate the diverse methods of understanding the construct of 'well-being'	<p>Self directed: Read journal articles, books to collate information by studying various means of well being</p> <p>Lecture on types and use of teaching learning material in context to understand well being</p> <p>Lecture on types and methods of assessment</p> <p>Lecture on types and impact on one's health and well being</p>	<p>Comment on a selected article's theoretical perspective.</p> <p>Prepare a list of teaching learning materials that can be used for understanding in well being in Indian society</p> <p>Evaluate pros and cons of different types of assessment</p> <p>Comment on how health and well being can be improved by using good quality attitude</p>
2.	The students would be able to think about developmental psychopathology in childhood and adolescence	<p>Review journals, books, identifying effective presentation of concepts.</p> <p>Research presentation on selected aspects of development psychopathology in children and adolescents</p>	<p>Enlist criteria for arrangements for selection of quality in hand material for children and adolescents</p> <p>Discuss researches, its applicability and ethical concerns related to psychopathology of children and adolescents</p> <p>Enlist and discuss contemporary studies related to psychopathology of children and adolescents</p>
3.	To gain an understanding of the preventive, promotive and therapeutic approaches to well-	Lecture on issues related to preventive and promotive measures to well being of children and adolescents	Individual presentation on any one case study of using innovative therapeutic approaches to well-being of children and adolescence

	being in childhood and adolescence	<p>Read journal articles, books to organise information related to preventive and promotive processes to well being of children and adolescents</p> <p>Examine select readings related to historical perspective on preventive, promotive and therapeutic approaches to well-being in childhood and adolescence</p>	<p>Focus group discussion on individual understanding about the need for therapeutic approaches to well-being of children and adolescence and how it can achieved</p> <p>Review what descriptions are children and adolescents friendly for their well being</p> <p>Comment on reforms in using techniques of well being historically with reflection on the contemporary approaches</p>
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**CHILD AND ADOLESCENT WELL-BEING  
PRACTICAL**

**Maximum Marks: 100**

**Duration: 3 Hrs.**

**Course Objective:**

To provide skills on training and integrates holistic approaches like mental health (mind) and physical health (body) resulting in disease prevention and health promotion

**Course Learning Outcomes:**

The student will be able to-

1. Develop their skill on on both the experiential and reflective learning.

**CONTENT**

**PERIODS**

- The students will be required to attend a Training Workshop in Counselling (4 hrs.). During the workshop they will conduct mock counselling sessions. 24
- Case-profile of a child or an adolescent with behaviour difficulties/ disorder. 8
- Undertake analysis of data produced by any in-depth qualitative/ quantitative assessment study/ survey conducted for children and adolescents of difficult behaviour/ disorder to

draw inferences and suggest an improvement plan for the programme /system assessment.

16

## **COUNSELLING FOR CHILD DEVELOPMENT THEORY**

**Maximum Marks: 100**

**Duration 3Hrs.**

### **Course Objective:**

The critical evaluation of diverse counselling concepts, theories and techniques will be promoted through debate, discourse and written assignments.

### **Course Outcomes:**

The student will be able to-

1. Appreciate the purpose, scope, theories, and practises of counselling for child development.
2. Understand development needs from the lifespan perspective; identify at risk children and assess various concerns that families bring into the counselling process.

## **CONTENTS**

## **PERIODS**

### **UNIT I: The purpose and need for counselling during child development 16**

- Purpose and need for counselling
- Understand human needs from the lifespan perspective;
- Developmental stages and needs- Infancy, Preschool years, Middle Childhood, Adolescence.
- Familial contexts and challenges-
  1. Family types- Nuclear, Joint families, Single parent families, adoptive families, same sex families.
  2. Chronic illness, marital discord, domestic violence, drug/ alcohol abuse, disability, mental illness
  3. Occupational correlates- long working hours, institutional/home carers
- Child related concerns- Developmental delays, Behavioural challenges, Academic and school related issues, Health and feeding challenges,
- Adolescent concerns- Childhood disorders - emotional disturbances and disorders; over controlled, under controlled disorders and developmental disorders; adolescent problems and disorders - persistent anti-social behaviour, delinquency, depression, Body concerns and Self- esteem issues, bullying, sexuality, board exams, transition to college, career, romantic issues
  1. Addictions

### **UNIT II: Self Reflections and orientation of the counsellor**

**8**

- Values, attitudes, personal biases/prejudices that may impact the counselling practise
- Core skills of counselling: genuineness, empathy, and positive regard.
- Maintain the ethical limits of the counselling relationship and safeguard the confidentiality.
- Techniques of observation, attending, active listening, empathy, appropriate questioning, paraphrasing, reflection of feeling and thought, summarization, confrontation and constructive use of silence.
- Interpersonal skills in counselling

### UNIT III: Introduction to major theories and processes

8

- Classification of Counselling theories and techniques
  - Psychoanalytic Approaches.
  - The Experiential and Relationship
  - Humanistic Approaches.
  - The Action Therapies
  - The System Perspectives
  - Cognitive-Behavioural Approaches

### UNIT IV: Basic Counselling skills and practices

16

- Individual counselling
- Family counselling
- Group Counselling
- The counselling process- assessing body language, relationship building; transference and counter transference; reassessment of problems and concerns; goal setting; initiating interventions; supporting the implementation; evaluating action and sustaining change; termination and follow-up.

#### Suggested Readings:

- Armstrong, K.H., Ogg, J.A., Sundman-Wheat, A.N., & St. John Walsh, A. (2014). *Evidence-based interventions for children with challenging behaviors*. New York: Springer.
- Beidel, D.C., & Turne, S.M. (2005). *Childhood anxiety disorders: A guide to research and treatment*. New York: Routledge.
- Blocher, D.H. (2000). *Counselling: A developmental approach*. USA: Wiley
- Edworthy, A. (2000). *Managing stress*. Buckingham: Open University Press.
- Gladding, S.T. (2009). *Counseling: A comprehensive profession*. New Delhi: Pearson.
- Golden, B. (2003). *Healthy anger: How to help children and teens manage their anger*. NY: Oxford University Press.
- Gumbiner, J. (2003). *Adolescent assessment*. New Jersey, NJ: Wiley & Sons.
- Jacobs, Ed. E., Mason, R.L., & Harvil, R.L. (2009). *Group counselling: Strategies and skills*. Canada: Cengage learning.
- Jolley, R.P. (2010). *Children & pictures: Drawing and understanding*. UK: Wiley-Blackwell
- Kinra, A.K. (2008). *Guidance and counselling*. New Delhi: Dolley Kindersley.

#### Teaching plan:

- **Week 1:** Purpose and need for counselling; Understand human needs from the lifespan perspective
- **Week 2:** Familial contexts and challenges
- **Week 3:** Developmental stages and needs- Infancy, Preschool years, Middle Childhood, Adolescence. Child related concerns- Developmental delays, Behavioural challenges, Academic and school related issues, Health and feeding challenges
- **Week 4:** Adolescent concerns
- **Week 5:** Values, attitudes, personal biases/prejudices that may impact the counselling practise; Core skills of counselling: genuineness, empathy, and positive regard; Maintain the ethical limits of the counselling relationship and safeguard the confidentiality

- **Week 6:** Techniques of observation, attending, active listening, empathy, appropriate questioning, paraphrasing, reflection of feeling and thought, summarization, confrontation and constructive use of silence; Interpersonal skills in counselling
- **Week 7:** Classification of Counselling theories and techniques- Psychoanalytic Approaches, The Experiential and Relationship, Humanistic Approaches
- **Week 8:** The Action Therapies, The System Perspectives, Cognitive-Behavioural Approaches
- **Week 9:** Individual counselling
- **Week 10:** Family counselling
- **Week 11:** Group counselling
- **Week 12:** The counselling process- assessing body language, relationship building; transference and counter transference; reassessment of problems and concerns; goal setting; initiating interventions; supporting the implementation; evaluating action and sustaining change; termination and follow-up.

### Facilitating the achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Appreciate the purpose, scope, theories, and practises of counselling for child development.	<ul style="list-style-type: none"> <li>• Self- directed: Read journal articles, books to collate information on area</li> <li>• Lecture &amp; discussion specific to areas</li> <li>• Audio visual resources</li> </ul>	Classroom presentation and discussions
2.	Understand development needs from the lifespan perspective; identify at risk children and assess various concerns that families bring into the counselling process	<ul style="list-style-type: none"> <li>• Review academic writings and research studies</li> <li>• Lecture on domains of development and stages</li> <li>• Individual student presentations with inputs from teacher and fellow students</li> <li>• Read journal articles, books</li> <li>• Examine select readings</li> <li>• Invited expert speakers on select areas</li> </ul>	<p>Written assignments on selected topics</p> <p>Group/ individual presentations on domains and concepts</p> <p>Class test on areas covered</p>

## **COUNSELLING FOR CHILD DEVELOPMENT PRACTICAL**

**Maximum Marks: 50**

**Duration: 3Hrs.**

**Course Objectives:** To develop and practice the basic counselling skills of observation, attending, active listening, empathy, appropriate questioning, paraphrasing, reflection of feeling and thought, summarization, confrontation and constructive use of silence.

**Course Outcomes:**

1. The student will be able to develop skills to identify the problem through the counselling process.
2. Develop skills in using select approaches and techniques of counselling.

**CONTENT**

**Periods**

**UNIT I: Introduction to Counselling: connecting theories to practise**

**12**

- Developing self-awareness in the counselling process
- Genogram & Life Graph
- Small group exercises in self-discovery
- Steps in the process

**UNIT II: Counselling Skills & Techniques**

**20**

Micro-skills and techniques in counselling through role plays using methods derived from select theoretical approaches. The counselling process-

- Attending and listening skills
- Responding and questioning techniques
- Assessing body language, relationship building; transference and counter transference; reassessment of problems and concerns;
- Goal setting; initiating interventions; supporting the implementation;
- Evaluating action and sustaining change; termination and follow-up.
- Documenting sessions and writing a counselling reports

**UNIT III: Internship**

**16**

- Placement in Counselling Centres/ hospitals/ Helplines/NGO's/CGC's/ schools

**Suggested Readings:**

- Blocher, D.H. (2000). *Counselling: A developmental approach*. USA: Wiley
- Gladding, S.T. (2009). *Counseling: A comprehensive profession*. New Delhi: Pearson.
- Jacobs, Ed. E., Mason, R.L., & Harvil, R.L. (2009). *Group counselling: Strategies and skills*. Canada: Cengage learning.
- Jolley, R.P. (2010). *Children & pictures: Drawing and understanding*. UK: Wiley-Blackwell
- Kinra, A.K. (2008). *Guidance and counselling*. New Delhi: Dolley Kindersley.
- Nelson-Jones, R. (2011). *Theory and practice of counselling and therapy*. Los Angeles: Sage.
- Peseschkian, N. (1985). *Oriental stories as tools in psychotherapy: The merchant and the parrot*. New Delhi: Sterling publishers.

- Redgrave, K. (2000). *Care therapy for children*. London: Continuum.
- VanFleet, R., Sywulak, A.E., & Sniscak, C.C. (2010). *Child-centered therapy*. New York: The Guilford Press.
- Welfel, E., & Patterson, L.E. (2000). *The counselling process*. CA: Wordsworth.
- Winnicott, D.W. (1964). *The child, the family and the outside world*. England: Penguin.

**M.Sc. Fabric and Apparel Science**

**Department of Home Science**

**Lady Irwin College**

**University of Delhi**

**Course Credit Structure-CBCS**

**2018**

The postgraduate programme in '**Textiles and Clothing**' was initiated in the academic year 1987- 88. The revised post graduate curriculum with a change in nomenclature to '**Fabric and Apparel Science**' was introduced in 2007. The semester system came into effect from July 2011, by offering four semesters during post-graduation. It has evolved and developed over the past three decades, achieving high standards of academic excellence. The programme is suitably supported by requisite infrastructure, latest equipment, computer facilities and a department library. The courses have been diversified and re-contextualized keeping pace with the latest developments in the textile and garment industry.

**Vision:**

To equip the students with an understanding of design and technology in Fabric and Apparel along with an appreciation of our rich textile culture.

**Mission:**

- To inculcate a close awareness of current trends, new developments and technological changes in the field of Fabric and Apparel Science.
- To foster appreciation of the traditions and heritage of textiles of the past and draw inspiration for the present.
- To provide depth, scope and professional competence through formal and non-formal education programmes for continued professional growth.
- To equip individuals with the knowledge and skills necessary for creative, managerial and technical careers as well as entrepreneurship in the field of textiles and apparel industry.

**Revision of the PG Syllabus:**

The CBCS PG Curriculum is being revised to sync the Masters program with the undergraduate program which was introduced under CBCS scheme three years back. In order to develop the course curriculum of the Masters in Fabric Science Programme, the department reached out to its stake holders in different areas. The old syllabus was sent to various experts in the industry as well as academics. Some of the experts who were consulted for the revised syllabus are as follows:

- Mr. Nidhi Datt, Director, Norwest, PDS Multinational, Gurugram
- Mr. Vikas Kapoor, CEO, EmbIQ,

- Mr. RC Kesar, Director, OGTC
- Dr. Archana Gandhi, Head Research, NIFT, Delhi
- Dr. Sudha Dhingra, Associate Professor, Depart of Textile Design, NIFT, Delhi
- Dr. Anu Sharma, Assistant Professor, Department of Textile Design, NIFT Delhi
- Ms. Namrata Dalela, Textile Conservationist
- Dr RoliPurwar, Associate Professor, Delhi Technological University.
- Dr Kusum Chopra, Professor and Academic Advisor, FMG Group of Institutions, Greater Noida
- Faculty, Department of Fashion Communication, NIFT Delhi

The feedback on the old syllabus and suggestions for new syllabus based on the present day requirements of the industry were taken and incorporated in the syllabus.

**Programme Objectives:**

- To inculcate a close awareness of the current trends, new developments and technological change in textiles & clothing field
- To foster appreciation of the tradition and heritage of textiles of the past and draw inspiration for the present
- To provide depth, scope and professional competency through formal and informal education programmes for continued professional growth
- To equip individuals with the knowledge and skills necessary for creative, managerial and technical careers and entrepreneurship
- To contribute towards the economy of the country through research and development

**Programme Specific Outcomes:**

**Students of Master’s program in Fabric and Apparel Science, after graduation, will be able to:**

- Understand the current processes and trends, new developments and technological changes in the field of textiles and apparel.
- Identify and appreciate the historic textiles and costumes of the world and draw inspiration for the present

- Apply creative, managerial and technical skills for careers and entrepreneurship in the field of apparel and textiles.
- Understand and apply tools and methods of research and statistics for conducting research in the subject area.
- Apply their knowledge and skills and reach out to the community for their capacity building.

## COURSE CREDIT SCHEME

<u>Semester</u>	<u>Core Courses</u>			<u>Elective Course</u>			<u>Open Elective Course</u>			<u>Total Credits</u>
	No. of papers	Credits (L+T/P)	<b>Total Credits</b>	No. of papers	Credits (L+T/P)	<b>Total Credits</b>	No. of papers	Credits (L+T/P)	<b>Total Credits</b>	
I	4	16L+6T/P	<b>22</b>							<b>22</b>
II	5	12L+12 T/P	<b>24</b>				1	2	<b>2</b>	<b>26</b>
III	5	8L+ 8P	<b>16</b>	2	8L+ 4P	<b>12</b>				<b>28</b>
IV	1	4	<b>4</b>	3	12L +6P	<b>18</b>				<b>22</b>
			<b>66</b>			<b>30</b>			<b>2</b>	<b>98</b>

**SEMESTER I**

<b>Number of core courses</b>	<b>Credits in each core course</b>			
<b>Course</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
Core course 1 FASCC101: Research methods	4		1	5
Core course 2 FASCC102: Advanced Fabric Science	4	2		6
Core course 3 FASCC103: Garment Manufacturing Technology	4	2		6
Core course 4 FASCC104: Historic Costume	4		1	5
Total credits in core course	22			
Total credits in Semester I	22			

<b>SEMESTER II</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 5 FASCC201: Statistics and Computer Application	4	2		6
Core course 6 FASCC202: Textile Finishing and Evaluation	4	2		6
Core course 7 FASCC203: Textile Design Development and Computer Application		4		4
Core course 8 FASCC204: Fashion Merchandise and Retail	4			4
Core course 9 Integrated Practical FASCC205: Advanced Pattern Making and Garment Construction		4		4
Total credits in core course	24			
<b>Number of Open Electives</b>	<b>Credits in each open elective</b>			
	Theory			Credits
Open Elective 1: FASOE201: Fabrics for Interiors FASOE202: Fabric Study and Identification	2			2
Total credits in open elective	2			
<b>Total credits in Semester II</b>	<b>26</b>			

<b>SEMESTER III</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 10 FASCC301: Quality Assurance in Textiles and Apparel	4			4
Core course 11 FASCC302: Dyeing, Printing and Colour Measurement	4			4
Core course 12 Integrated Practical FASCC303: Dyeing, Printing and Colour Measurement		4		
Core course 13 FASCC304: Internship		2		2
Core course 14 FASCC305: Technical Writing and Seminar		2		2
Total credits in core course	16			
<b>Number of elective courses</b>	<b>Credits in each Elective course</b>			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 1	4	2		6
Elective course 2	4	2		6
Total credits in elective courses	12			
<b>Total credits in Semester III</b>	<b>28</b>			

**Elective Courses: Select any two of the following:**

- FASEC301-World Textiles: Techniques and Design
- FASEC302- Psychology of Fashion
- FASEC303- Women's Wear
- FASEC304- Sustainability in Textiles and Fashion Industry
- FASEC305-Marketing Management

<b>SEMESTER IV</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 15 FASCC401: Dissertation/Experiential Learning Project		4		4
Total credits in core course	4			
<b>Number of elective courses</b>	<b>Credits in each Elective course</b>			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 3	4	2		6
Elective course 4	4	2		6
Elective course 5	4	2		6
Total credits in elective courses	18			
Total credits in Semester IV	22			

**Elective Courses: Select any three of the following:**

- FASEC401-Children's Wear
- FASEC402-Functional Clothing
- FASEC403- Textiles for Home and Hospitality
- FASEC404- Technical Textiles
- FASEC405- Textile Conservation
- FASEC406- Fashion Communication
- FASEC407- Extension and Communication

# **SEMESTER I**

**SEMESTER I**

<b>Number of core courses</b>	<b>Credits in each core course</b>			
<b>Course</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
Core course 1 FASCC101: Research methods	4		1	5
Core course 2 FASCC102: Advanced Fabric Science	4	2		6
Core course 3 FASCC103: Garment Manufacturing Technology	4	2		6
Core course 4 FASCC104: Historic Costume	4		1	5
Total credits in core course	22			
Total credits in Semester I	22			

# **RESEARCH METHODS THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

## **Course objectives:**

To provide students understandings about the basic concepts, approaches and methods in conducting research thereby enabling them to appreciate and critique the nuances of designing a research study as well the ethical dimensions of conducting researches.

## **Course Learning Outcomes:**

Student will be able to -

1. Demonstrate knowledge of the scientific method, purpose and approaches to research
2. Compare and contrast quantitative and qualitative research
3. Explain research design and the research cycle
4. Prepare key elements of a research proposal
5. Explain ethical principles, issues and procedures

## **CONTENTS**

## **PERIODS**

### **UNIT I: Purpose of research**

**10**

- Definition, objectives and significance of research
- Types of research
- Scientific method: induction and deduction
- Research approaches: quantitative, qualitative and mixed
- Issues of relevance and cultural appropriateness

### **UNIT II: Principles of Research in quantitative and qualitative approaches**

**30**

#### *Research design*

- Meaning and need of research design
- Components and types of research design
- Issues in design construction

#### *Sampling, methods*

- Concept of sampling, key differences in the two approaches
- Sampling methods, sample size and sampling error
- Selecting participants and contexts to examine social phenomenon

#### *Data collection and analyses*

- Methods and measurement: Measurement in research, scales and errors in measurement, reliability and validity of measurement tools
- Methods of data collection and types of data
- Immersion, deep engagement, triangulation and reflexivity in qualitative data collection
- Data management and quality control
- Transcription in qualitative data analyses
- Errors in inference – Bias and confounding, reliability and validity issues
- Ensuring reliability and validity in qualitative research

### UNIT III : The Research Cycle

12

- Systematic literature review and referencing
- Formulating a research problem –Developing research questions and objectives, exploring research context/phenomenon
- Identifying variables, constructing hypotheses
- Deciding research approach and design
- Selection of sample/participants, choice of methods and analysis.
- Writing a research report-Styles and format.

### UNIT IV: Values, Social Responsibility and Ethics in Research

8

- Ethical principles guiding research: from inception to completion and publication of research
- Ethical issues relating to research participants and the researcher
  - Rights, dignity, privacy and safety of participants
  - Informed consent, confidentiality anonymity of respondents, voluntary participation, harm avoidance
  - Conflicts of interest or bias, Use of inappropriate research methodology, Incorrect reporting, misuse of information

#### Teaching Plan:

**Week 1:** Definition, objectives and significance of research

**Week 2:**Types of research, Scientific method: induction and deduction

**Week 3 :** Research approaches: quantitative, qualitative and mixed. Issues of relevance and cultural appropriateness

**Week 4:** Meaning and need of research design; types of research design, issues in design construction

**Week 5:** Concept of sampling, key differences in the two approaches, Selecting participants and contexts to examine social phenomenon

**Week 6:** Sampling methods, Sample size and sampling error

**Week 7:** Measurement in research, scales and errors in measurement , reliability and validity of measurement tools

**Week 8:** Methods of data collection and types of data ,Immersion, deep engagement, triangulation and reflexivity in qualitative data collection

**Week 9:** Data management and quality control; Transcription in qualitative data analyses

**Week 10:** Errors in inference – Bias and confounding, reliability and validity issues; Ensuring reliability and validity in qualitative research

**Week 11:**Research Cycle and writing research report

**Week 12:** Ethics in Research

#### Facilitating the achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Demonstrate knowledge of the scientific method, purpose and approaches to	Unit transaction through power point presentations,	Assignments, Open book test

	research.		
2.	Compare and contrast quantitative and qualitative research	Unit transaction through power point presentations and classroom discussion about review and critique of journal articles	Quizzes and objective test
3.	Explain research design and the research cycle	Unit transaction through power point presentations and classroom discussion using research case studies	Assignments, Open book test
4.	Prepare key elements of a research proposal	Unit transaction through power point presentations Students to develop a live research project in groups	Assignments, Open book test Assessment of live project
5	Explain ethical principles, issues and procedures	Unit transaction through power point presentations and classroom discussion about research proposals	Class assignments and quizzes

### Suggested Readings:

- Aschengrau A, Seage III GR. (2014) *Essentials of Epidemiology in Public Health*. (Third Edition). Sudbury, MA: Jones & Bartlett.
- Bell, J. (1999). *Doing your research project: Guide for first time researchers in social sciences*. New Delhi: Viva Books.
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, CA.: Sage.
- Blaxter, L. Hughes, C., & Tight, K. (1999). *How to research*. New Delhi: Viva Books.
- Bryman, A. (2008). *Social research method*. Oxford: Oxford University Press.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Denscombe, M. (1999). *The good research guide for small-scale social research projects*. New Delhi: Viva Publications.
- Denzin, N. and Lincoln, Y. (Eds.) 2005. *The Sage handbook of qualitative research*. London: Sage.

- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research*. Belmont, Calif.: Wadsworth.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier
- Miles, M. & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. London: Sage.
- Rothman K. (2002) *Epidemiology – An Introduction*. New York. NY: Oxford University Press.

## **ADVANCED FABRIC SCIENCE THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To provide students with the knowledge of the structure, production and properties of natural and synthetic fibers and to familiarize them with the various yarn and fabric production techniques.

### **Course Learning Outcomes:**

1. Understand the structure and production techniques of various natural and manmade fibers.
2. Describe the physical and chemical properties of fibers.
3. Understand the various conventional and non-conventional techniques of yarn spinning.
4. Demonstrate an understanding of various types of fabric forming methods.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Fiber: Structure, Production and Properties**

**22**

- Natural fibers- Cotton, Bastfibers, Silk, Wool
- Man-made fibers- Rayon, Acetate, Nylons, Aramids, Polyester, Acrylic, Modacrylic, Olefins, Elastomeric, Carbon fiber, Glass fiber
- Relationship of polymer structure to physical properties of fibers: Tensile, Moisture, Thermal, Optical and Electrical

#### **UNIT II: Yarn Spinning**

**8**

- Conventional spinning methods- ring spinning, rotor spinning
- Non-conventional spinning techniques

#### **UNIT III: Fabric Construction**

**18**

- Weaving
  - Yarn preparation for weaving
  - Types of Loom
  - Weaving operations
  - Loom timing cycle
  - Design interpretation and representation- draft and peg plan
- Knitting
  - Yarn preparation
  - Knitting elements
  - Knitted fabric structure- warp and weft.

- Knitting machines
- Techniques for knitwear production- fully-cut, fully-fashioned and integral.
- Non-woven
  - Production of non-woven
  - Types of non-woven fabrics and their properties
  - Application in various sectors- apparel and industrial

### **Suggested Readings:**

- Brackenbury, T. (2005). *Knitting Clothing Technology*, Blackwell Science Publishers
- Eric, O. (1975). *Spun Yarn Technology*, Butterworth Publication.
- Gohl, E. P. G. and Vilensky, L. D. (1983) *Textile science*. Melbourne: Longman Cheshire.
- Horrock A.R. and Anand, S.C. (2000). *Handbook of Technical Textiles*, Cambridge: Woodhead Publishing.
- Rastogi, D. and Chopra, S.(Ed) (2017) *Textile science*, India: Orient Black Swan Publishing Limited.
- Spencer, D.J. (2005) *Knitting Technology: A Comprehensive Handbook and Practical Guide*, 4th ed. Cambridge: Woodhead Publishing.
- Schwartz, P. (1979) *Fabric Forming Systems*, School of Textiles, North Carolina State University.
- Sekhri S. (2016) *Textbook of Fabric Science: Fundamentals to Finishing*, 2E, Delhi: PHI Learning Private Ltd.
- Trotman, E. R. (1984) *Dyeing and Chemical Technology of Fibers*, Sixth Edition, England: Charles Griffin and Company Ltd.

### **Teaching Plan:**

**Week 1:** Structure, production and properties of cotton and bast fibers, structure and production of silk

**Week 2:** Properties of silk, structure, production and properties of wool and rayon

**Week 3:** Structure, production and properties; Acetate, Nylons, Polyester

**Week 4:** Structure, production and properties: Acrylic, Modacrylic, Olefins, Elastomeric, Carbon and Glass fibers

**Week 5:** Study of various physical properties and their relation to polymer structure: Tensile, Moisture and Thermal properties

**Week 6:** Optical and Electrical properties; Yarn spinning: Ring spinning

**Week 7:** Rotor spinning, Other nonconventional methods of spinning

**Week 8:** Yarn preparation for weaving, Types of looms

**Week 9:** Weaving operation, Loom timing cycle, Draft and Peg plan

**Week 10:** Knitting elements, warp and weft knitting

**Week 11:** Knitting machines, Knitwear production- fully-cut, fully-fashioned and integral

**Week 12:** Production, properties and applications of non wovens

### Facilitating the Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the structure and production techniques of various natural and manmade fibers.  Describe the physical and chemical properties of fibers.	Unit transaction through power point presentations, videos  Visit to NITRA, other textile testing labs such as Bureau Veritas.	Quizzes, Assignment  Report of the visits and their presentation
2.	Understand the various conventional and non-conventional techniques of yarn spinning	Unit transaction through power point presentations, relevant videos of spinning processes  Visit to IIT, selected spinning mills in Delhi-NCR	Quizzes, Assignment  Report of the visits and their presentation
3.	Demonstrate an understanding of various types of fabric forming methods	Unit transaction through power point presentations, relevant videos of fabric forming systems  Visit to selected Knitting units, IIT for weaving and types of looms	Quizzes, Assignment  Report of the visits and their presentation

### ADVANCED FABRIC SCIENCE PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

#### Course Objectives:

To impart the knowledge about the physical properties of textiles and their testing procedures and to develop an understanding of the principals involved in testing of performance and colour fastness properties of textile fabrics.

#### Course Learning Outcomes:

1. Apply the knowledge about various testing procedures at yarn stage and relate it to fabric performance properties.

2. Relate the principles of fabric testing procedures with the functional, performance, aesthetic and comfort properties of textiles and fabrics.

## CONTENTS

## PERIODS

### UNIT I: Yarn Testing

16

- Yarn count
- Yarn length
- Crimp
- Twist per inch

### UNIT II: Fabric Testing

32

- Tensile strength
- Tear strength
- Bursting strength
- Fabric drape
- Bending length
- Crease recovery
- Abrasion resistance

### Suggested Readings:

- Booth, J. E. (1964) *Principle of textile testing an introduction to physical methods of testing textile fibers, yarns, and fabrics*. 2nd Edition. London: Meanness Butterworths.
- Hearle J.W.S. & Peters R.H. (1975). *The Physical Testing of Textile Fibers*. Heinmann: The Textile Institute.
- Saville, P. B. (1999) *Physical testing of textiles*. Cambridge: Woodhead Publishing Limited.
- Skinkle, J.H. (1940) *Textile Testing*. New York: Chemical Publishing Co. Inc. Brooklyn.

## GARMENT MANUFACTURING TECHNOLOGY THEORY

**Marks: 100**

**Duration: 3 Hrs.**

### Course Objectives:

The students will be able to familiarize with the functioning of the garment industry, its various processes and technical parameters in garment production. It will enhance awareness of sewn product, machinery and equipment and prepare the students for work around the garment industry.

### Course Learning Outcomes:

1. Knowledge of garment industry, structure and functioning
2. Knowledge related to processes before, during and after production
3. Familiarity with various machines, tools and equipment used in garment industry
4. Understand various materials and components of garment production

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I: Garment Industry</b>	<b>10</b>
<ul style="list-style-type: none"> <li>• Overview of the garment industry</li> <li>• Main sectors of the garment industry</li> <li>• Standards and specifications</li> <li>• Production capacity</li> <li>• Time and motion study- Introduction, effect of time and motion study on productivity in garment sector</li> <li>• Work-in-progress</li> </ul>	
<b>UNIT II: Pre-production Processes</b>	<b>10</b>
<ul style="list-style-type: none"> <li>• Recording measurements</li> <li>• Pattern making</li> <li>• Sampling</li> <li>• Fabric development and sourcing</li> <li>• Production planning &amp; control</li> <li>• Preparation of specification sheet/Tech-pack</li> </ul>	
<b>UNIT III: In-Production processes, Machines, Equipment and Work-aids</b>	<b>20</b>
<ul style="list-style-type: none"> <li>• Marker-making- planning, production, efficiency, methods of making</li> <li>• Spreading of fabric- requirements, methods, nature of fabric packages</li> <li>• Cutting – objective, methods and tools</li> <li>• Preparation before cutting- fusing, ticketing and bundling- purposes and types</li> <li>• Fusing- advantages, requirements, processes, equipment, methods and quality control</li> <li>• Stitch types-suitability and usage</li> <li>• Seam types-suitability and usage</li> <li>• Types of sewing machines- Basic lock stitch, chain stitch and over lock machines (Parts, function and sewing defects and remedies)</li> <li>• Special purpose machines- blind stitch, bar tack, button sewing and button holes</li> <li>• Types of sewing Needles</li> <li>• Types of sewing Threads</li> <li>• Feed system in sewing machines</li> <li>• Feed Dogs</li> <li>• Machine beds</li> <li>• Machine tables</li> <li>• Work chairs</li> <li>• Bundle clamps</li> <li>• Stackers</li> <li>• Various machine attachments</li> <li>• Handling various specialty fabrics</li> <li>• Alternative methods of joining material: welding and moulding</li> </ul>	
<b>UNIT IV: Post production Processes</b>	<b>8</b>
<ul style="list-style-type: none"> <li>• Garment finishing -Thread trimming, stain removal, cleaning, dry-cleaning, pressing, checking, folding &amp; packing, shipment inspection</li> </ul>	

- Warehousing- handling equipment, storage equipment, packaging equipment, transportation issues

**Suggested Readings:**

- Brown, Patty and Rice Janett (1998) Ready to Wear Apparel Analysis(2nd Edition), Prentice Hall.
- Carr, H & ,Latham, B (1984) The Technology of Clothing Manufacture, Black Well Scientific Publication.
- Cooklin.G. (2000)Introduction to Clothing Manufacture, Blackwell Scientific Publication.
- Glock And Kuntzz. (1995) Apparel Manufacturing – Sewn Product Analysis.
- NITRA TABLETS,(2006) NITRA.

**Teaching Plan:**

**Week 1:** Overview of the garment industry, main sectors of the garment industry and standards and specifications

**Week 2:** Production capacity, Time and motion study- Effect of time and motion study on productivity in garment sector

**Week 3:** Work-in-progress, pattern making processes in the industry

**Week 4:** Recording measurements on form and body, Pattern making.

**Week 5:** Pattern making continued

**Week 6:** Sampling, fabric development and sourcing, Production planning &control, preparation of specification sheet/Tech-pack

**Week 7:** Marker-making- planning, production, efficiency, methods of making, spreading of fabric- requirements, methods, nature of fabric packages, Cutting – objective, methods and tools, preparation before cutting.

**Week 8:** Fusing, ticketing and bundling- purposes and types, Fusing- advantages, requirements, processes and equipment, methods and quality control, Stitch types-suitability and usage.

**Week 9:** Seam types-suitability and usage, types of sewing machines- Basic lock stitch, chain stitch and over lock machines- ( Parts, function and sewing defects and remedies), Special purpose machines- blind stitch, bar tack, button sewing and button hole machines, types of sewing needles, threads.

**Week 10:** feed system in sewing machines, feed dogs, machine beds, machine tables, work chairs, bundle clamps, stackers, various machine attachments, handling various specialty fabrics;

**Week 11:** Alternative methods of joining material: welding and moulding, garment finishing - thread trimming, stain removal, cleaning, dry-cleaning, pressing, checking, folding & packing, shipment inspection

**Week 12:** Warehousing- handling equipment, storage equipment, packaging equipment, transportation issues

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Knowledge of garment industry, structure and functioning	Powerpoint presentation	Test/Quiz

2.	Knowledge related to processes before, during and after production	Powerpoint presentation, industrial visits	Visit Reports
3.	Familiarity with various, machines, tools and equipment used in garment industry	Powerpoint presentation, industrial visits	Visit Reports
4.	Acquaintance with materials such as: Fabrics, threads, needles and components such as: seams and stiches	Powerpoint presentation, industrial visits, industrial fairs visit	Assignment/ visit reports

## **GARMENT MANUFACTURING TECHNOLOGY PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs**

### **Course Objectives:**

To develop skills in design and development for making patterns for garment using flat pattern method, grading them to different sizes and learning the processes involved in construction of garments for women. To also successfully cut and sew a whole garment.

### **Course Learning Outcomes:**

1. Measure and record measurements accurately
2. Style read a design and break it down into various components
3. Develop relevant patterns for a garment design
4. Judge fit of basic garments
5. Successfully sew basic fitted garments

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Basic patterns**

**8**

- Drafting basic blocks- bodice, sleeve, skirt

#### **UNIT II: Style creation through flat pattern making**

**20**

- Creating styles in bodices (dart manipulation)
- Creating variations in sleeves ( set-in sleeve variations and all-in one sleeves)
- Creating variations in collars (peter-pan variations, mandarin and basic shawl collar)
- Creating styles in skirts (A-line, basic flared, gathered)
- Creating patterns for other garment components: pockets, plackets, waistbands, belts, slits, vents, frills ruffles godets, gussets, peplums

#### **Unit III: Marker planning, cutting and garment construction processes**

**20**

- Construction of samples of plackets and pockets(Patch pocket and Inseam pocket)
- Marker plan for any one dress in at least three sizes
- Construction of the following- Saree blouse, bodices with various sleeves and collars variation and plackets, fitted skirt with waistband

**Suggested Readings:**

- Armstrong, Helen Joseph., (2013). *Draping for Apparel Design*, 3<sup>rd</sup> Edition, ISBN-13:9781609012403, Publisher: Bloomsbury Academic.
- Armstrong, Helen Joseph. (2000). *Pattern Making for Fashion Design*, 4<sup>th</sup> ed.
- Pearson Crawford Connie Amaden. (1989). *The Art of Fashion draping*, 2<sup>nd</sup> ed. New York: Education Ptc. Ltd. Fairchild Publications.
- Jaffe Hilde and Nuric Relic. (1993) *Draping for Fashion Design*, New Jersey: Fashion Institute of Technology.

**HISTORIC COSTUME  
THEORY**

**Marks: 100****Duration: 3 Hrs.****Course Objectives:**

The course aims to provide a deep insight into the development of costume from the ancient times to the 19<sup>th</sup> century, considering socio-cultural and technological changes. It would facilitate an understanding of the styles and special features in costume through the ages.

**Course Learning Outcomes:**

1. Understand the evolution of western costume.
2. Gain awareness of different styles and special features in costume through the ages.
3. Draw inspiration from the long established styles for designing.

**CONTENTS****PERIODS**

<b>UNIT 1: Importance of World Textiles and Costume in Historical Perspective</b>	<b>4</b>
<ul style="list-style-type: none"> <li>• Sources of information           <ul style="list-style-type: none"> <li>○ Archaeological discoveries</li> <li>○ Ancient literature, chronicle and archival records</li> <li>○ Museums, art galleries, inventories of churches and palaces</li> </ul> </li> <li>• The origin of dress</li> </ul>	
<b>UNIT II: Costume in Early Civilizations</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Costumes in the ancient world (300BC- 300 AD)           <ul style="list-style-type: none"> <li>○ Mesopotamia, Egypt, Crete, Greece, Rome, India</li> </ul> </li> </ul>	
<b>UNIT III: The Middle Ages</b>	<b>14</b>
<ul style="list-style-type: none"> <li>• India</li> <li>• Byzantium, Coptic</li> <li>• The feudal ages (900 AD- 1300AD)</li> <li>• The late middle ages (1300AD-1500AD)</li> </ul>	
<b>UNIT IV: Costume in 15<sup>th</sup> to 16<sup>th</sup> century</b>	<b>10</b>
<ul style="list-style-type: none"> <li>• Renaissance: Italy, France, England</li> </ul>	

- India: Mughal period

### UNIT V: Costume in 17<sup>th</sup> to 19<sup>th</sup> century

20

- Baroque and Rococo periods
  - France and England
- French revolution and thereafter (1790 AD-1900 AD)
  - The Directoire and empire period (1790AD-1820AD)
  - The Romantic period(1820A.D-1850AD)
  - The Crinoline periods (1850 AD- 1869AD)
  - The Bustle period (1870 AD-1900 AD)

#### Suggested Readings:

- Alkazi, R. (1983) *Ancient Indian Costume*, Art Heritage Books.
- Black, J. A. and Garland M. (1978) *A History of Fashion*, London: Orbis Publishing Ltd.
- Cumming, V. (2004) *Understanding Fashion History*, London: Batsford.
- Lester, K.M. (1956) *Historic Costume*, Illinois: Chas A Bennett Co. Inc.
- Peacock, J. (2007) *The Chronicle of Western Costume*, Thames and Hudson.
- Tortora, P. G. and Marcketti, S. B. (2015) *Survey of Historic Costume*, Fairchild Books.

#### Teaching Plan:

**Week 1:** Importance of world textiles and costume in historical perspective, Sources of information, The origin of dress

**Week 2:** Costumes in the ancient world (300BC- 300 AD) Mesopotamia, Egypt, Crete

**Week 3:** Greece, Rome, India

**Week 4:** The Middle Ages Byzantium, Coptic, India

**Week 5:** The feudal ages (900 AD- 1300AD), The late middle ages (1300AD-1500AD)

**Week 6:** The Renaissance (15<sup>th</sup> -16<sup>th</sup> century) –Italy, France

**Week 7:** Renaissance(15<sup>th</sup> -16<sup>th</sup> century) – England, India- Mughal period

**Week 8:** Costume in 17<sup>th</sup> to 19<sup>th</sup> century, Baroque and Rococo periods

**Week 9:** French Revolution and thereafter (1790 AD-1900 AD)

**Week 10:** The Directoire and Empire period (1790AD-1820AD)

**Week 11:** The Romantic period (1820A.D-1850AD), Crinoline period (1850 AD- 1869AD)

**Week 12:** The Crinoline period (1850 AD- 1869AD), The Bustle period (1870 AD-1900 AD)

#### Facilitating the Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Learn the importance of world textiles and costume in historical perspective	Power point presentation, lecture and visit to museum	Assignment, Report of the visit
2.	Understand Costume in early civilizations	Power point presentation, lecture, visit to museum and short clippings of relevant films	Assignment, Test, Report of the visit

3.	Describe the costume of the Middle Ages	Power point presentation, relevant videos, lecture	Quizzes, Assignment, Presentations
4.	Understand the costume during Mughal period and Renaissance	Power point presentation, relevant videos and lecture, visit to museum	Report of visit, Assignment, Test
5.	Compare styles and features in Costume of 17 <sup>th</sup> to 19 <sup>th</sup> century	Power point presentation, relevant videos and short clippings of relevant films, lecture	Open book test, Quizzes, Presentations

## **SEMESTER II**

<b>SEMESTER II</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 5 FASCC201: Statistics and Computer Application	4	2		6
Core course 6 FASCC202: Textile Finishing and Evaluation	4	2		6
Core course 7 FASCC203: Textile Design Development and Computer Application		4		4
Core course 8 FASCC204: Fashion Merchandise and Retail	4			4
Core course 9 Integrated Practical FASCC205: Advanced Pattern Making and Garment Construction		4		4
Total credits in core course	24			
<b>Number of Open Electives</b>	<b>Credits in each open elective</b>			
	Theory			Credits
Open Elective 1: FASOE201: Fabrics for Interiors FASOE202: Fabric Study and Identification	2			2
Total credits in open elective	2			
<b>Total credits in Semester II</b>	<b>26</b>			

**STATISTICS AND COMPUTER APPLICATIONS  
THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

**Course Learning Outcomes:**

Student will be able to-

1. Differentiate between the qualitative and quantitative methods of analysis of data
2. Suitably apply data reduction strategies and illustrate data using various graphical methods
3. Use appropriate parametric and non parametric statistical tests
4. Draw conclusions and interpretations from the analysis of data using various statistical softwares

**CONTENTS**

**PERIODS**

**UNIT I: Introduction to statistics**

**4**

- Basic principles and concepts in statistics
- Orientation to qualitative and quantitative research procedures
- Measurement and computation- Scales of measurement, Reliability and validity

**UNIT II: Organisation and presentation of data**

**10**

- Qualitative and quantitative data- Coding & data reduction strategies
- Organisation of Data: Frequency distributions vs. thematic analysis
- Percentage, percentile ranking and frequencies
- Univariate, bivariate and multivariate tables
- Graphic representation: Graphs, diagrams and charts

**UNIT III: Descriptive Statistics**

**6**

- Applications of descriptive statistics
- Measures of Central tendency and Variability

**UNIT IV: Probability and normal distribution**

**12**

- Basic principles and applications of probability
- Normal curve
- Characteristics of distributions: Skewness, kurtosis
- Testing hypotheses: Levels of significance and p values
- Errors in hypothesis testing: Type I, Type II
- Sampling distribution
- Standard scores, calculation and application

**UNIT V: Statistical tests**

**12**

- Concept of parametric and non-parametric tests, statistical tests and level of

measurement

- Parametric tests of difference: T test, ANOVA and post hoc analysis of significance
- Parametric tests of association: Pearson's product moment r
- Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis
- Non-parametric tests of association: Spearman's r
- Chi-square test
- Regression and its applications
- Tests for ascertaining reliability of instruments

#### **UNIT VI: Analysis and interpretation**

**4**

- Guidelines for selecting an appropriate test
- Interpreting results- Statistical inference
- Research Conclusion and recommendations

#### **Suggested Readings:**

- Agresti, A. & Franklin C.A. (2009) *Statistics: The Art and Science of Learning from Data* ( Second Edition) Boston,MA: Pearson Prentice Hall, ISBN 978-0-13-513199-2
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage.
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.
- Diez, D. M., Barr, C. D., Cetinkaya-Rundel M. (2015). *OpenIntro Statistics*:((Third Edition). CreateSpace Independent Publishing Platform. ISBN-10: 194345003X, ISBN-13: 978-1943450039 <http://www.openintro.org/stat/textbook.php>.
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Fowler, F.J. (1988). *Survey Research Methods. Applied Social Research Methods Series, Vol. 1*. Newbury Park, CA: Sage.
- Greene, S. and Hogan, D. (Eds.). (2005). *Researching Children's Experiences: Methods and Approaches*. London: Sage.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier,
- Minium, E. W., King, B. M., & Bear, G. (1995/2004). *Statistical Reasoning for Psychology and Education*. New York: Wiley and Sons.
- Muijs, D. (2004). *Doing Quantitative Research in Education with SPSS*. London: Sage.

#### **Teaching plan:**

**Week 1:** Basic principles and concepts in statistics, Orientation to qualitative and quantitative research procedures, Scales of measurement, Reliability and validity

**Week 2:** Qualitative and quantitative data- Coding and data reduction strategies, Organisation of Data: Frequency distributions vs. thematic analysis

**Week 3:** Percentage, percentile ranking and frequencies, Univariate, bivariate and multivariate tables

**Week 4:** Graphic representation: Graphs, diagrams and charts, Applications of descriptive statistics

**Week 5:** Measures of Central tendency and Variability

**Week 6:** Basic principles and applications of probability ,Normal curve

**Week 7:** Characteristics of distributions: Skewness, kurtosis,Testing hypotheses: Levels of significance and p values

**Week 8:** Errors in hypothesis testing: Type I, Type II,sampling distributionstandard scores, calculation and application

**Week 9:** Concept of parametric and non-parametric tests, statistical tests and level of Measurement, Parametric tests of difference: T test, ANOVA and post hoc analysis of significance

**Week 10:** Parametric tests of association: Pearson’s product moment r, Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis

**Week 11:** Non-parametric tests of association: Spearman’s r,Chi-square test,Regression and its applications,Tests for ascertaining reliability of instruments

**Week 12:** Guidelines for selecting an appropriate test, Interpreting results- Statistical inference, Research Conclusion and recommendations

### **Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the basic concepts, theories and methods in statistics and Differentiate between the qualitative and quantitative methods of analysis of data	Unit transaction through power point presentations,	Assignments, Open book test
2.	Suitably apply data reduction strategies and illustrate data using various graphical methods	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test
3.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
4.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
5	Use appropriate parametric and non-parametric statistical tests	Unit transaction through power point presentations and classroom discussion	Class assignments and quizzes
6	Draw conclusions and interpretations from the analysis of data	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test

**STATISTICS AND COMPUTER APPLICATIONS  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

**Course Learning outcomes:**

Student will be able to-

1. Identification of various types of data measurement tools/tests/procedures and understanding the concept of standardisation and reliability and validity.
2. Application of various data reduction and coding methods on quantitative and qualitative data.
3. To be able to organise the data and effectively use appropriate quantitative and qualitative statistical softwares for analysis of data
4. Draw conclusions and interpretations from the analysed data and write reports.

**Teaching plan:**

**Week 1, 2 and 3** - Review of Measurement tools/tests/procedures: Standardisation, Reliability, Validity

**Week 4 and 5** - Data reduction strategies and Coding of quantitative and qualitative data

**Week 6, 7, 8 and 9** - Analysis of data using appropriate statistical software (Qualitative and quantitative open source software)

**Week 10** - Data Visualization

**Week 11 and 12** - Data Interpretation and report writing

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	<b>Week 1 &amp; 2</b> Identification of various types of data measurement tools/tests/procedures and understanding the concept of standardisation and reliability and validity	Standard tools/test methods and procedures will be reviewed to understand concepts of reliability and validity	Standardised tools will be given to students and activities will be planned to understand the concept of standardisation and determination of reliability and validity
2	<b>Week 3</b> Introduction to computer tools and software in statistical analysis	Open source and other software for quantitative and qualitative data analysis will be reviewed	Students gets familiarized with basic functions and tools of

		and students will be made familiar about their use	any statistical software
3.	<b>Week 4 and 5</b> Application of various data reduction and coding methods on quantitative and qualitative data.	Data collected using standard measurement tools will be organised using appropriate data reduction strategies and coded	Data organisation through spread sheets – manually and using computers. Display of data using graphical representation methods.  Data is collected, coded and formulates tables using appropriate software
3.	<b>Week 6,7 8 and 9</b> To be able to organise the data and effectively use appropriate quantitative and qualitative statistical softwares for analysis of data	Data analysis using suitable quantitative and qualitative software	Assignments to be planned using statistical software for  Data entry and its analysis.  Use of statistical test for analysis
4.	<b>Week 10, 11 and 12</b> Draw conclusions and interpretations from the analysed data and write reports	Data interpretation and Report writing	Assignments on interpretation of the analysed data  Statistical conclusion and Research conclusion

## TEXTILE FINISHING AND EVALUATION THEORY

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To course aims to impart to students knowledge and understanding of the chemistry, mechanism and application process of various textile finishes. It aims to enhance the awareness of future trends in textile finishing.

### **Course Learning Outcomes:**

1. Understand the methods of application of finishes on different textile substrates
2. Describe the preparatory finishes for various fabrics.
3. Understand the chemistry and mechanism of action of application of various finishes.

4. Gain awareness of new advancements in the area of finishing.

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I: Application of Finishes</b>	<b>8</b>
<ul style="list-style-type: none"><li>• Methods of application- practices and suitability</li><li>• Requirement for different substrates</li></ul>	
<b>UNIT II: Finishes - Preparatory Processes</b>	<b>10</b>
<ul style="list-style-type: none"><li>• Cellulosic- desizing, scouring, bleaching, mercerization</li><li>• Protein- degumming, weighting, dewaxing, scouring, bleaching, carbonising, milling</li><li>• Man-made- scouring, bleaching, heat setting</li></ul>	
<b>UNIT III: Finishes –Aesthetic</b>	<b>12</b>
Chemistry, method of application and evaluation	
<ul style="list-style-type: none"><li>• Softening and stiffening finishes</li><li>• Optical brightening agents</li><li>• Enzymatic finishes- bio-polishing, stone wash, sand wash etc.</li><li>• Special calendaring</li><li>• Special effect finishes (Sueding, Peaching, Artificial leather finish)</li></ul>	
<b>UNIT IV: Finishes – Functional</b>	<b>14</b>
Chemistry, method of application and evaluation	
<ul style="list-style-type: none"><li>• Water repellent finishes</li><li>• Soil and stain repellent finishes</li><li>• Setting finishes (Sanforisation, crabbing, heat setting)</li><li>• Anti-crease/ durable press finishes</li><li>• Anti-static finishes</li><li>• Flame retardant finishes</li><li>• Anti-microbial finishes</li><li>• Moth proofing</li><li>• UV protective finishes</li><li>• Super hydrophobic finish-Lotus leaf effect</li><li>• Coating and lamination</li></ul>	
<b>UNIT V: Innovations in Textile Finishing</b>	<b>4</b>
<ul style="list-style-type: none"><li>• Ecological concerns and eco-friendly processing of textiles</li><li>• Microencapsulation</li><li>• Nanotechnology in field of textile finishing</li><li>• New developments</li></ul>	
<b>Suggested Readings:</b>	
<ul style="list-style-type: none"><li>• Marsh, J.T. (1979) <i>An Introduction to Textile Finishing</i>, Bombay: B.I. Publications.</li><li>• Rastogi, D. and Chopra, S. (Eds.) (2017)<i>Textile Science</i>, India: Orient Black Swan Publishing Limited.</li></ul>	

- Rouette, H.K. (2001) *Encyclopedia of Textile Finishing*, Volumes 1 to 3, Berlin: Springer.
- Schindler, W.D. and Hauser, P.J. (2004) *Chemical Finishing of Textiles*, The Textile Institute, England: Woodhead Publishing Ltd.
- Trotman, E. R. (1984) *Dyeing and Chemical Technology of Fibers*, Sixth Edition, England: Charles Griffin and Company Ltd.
- Sekhri S., (2016) *Textbook of Fabric Science: Fundamentals to Finishing*, 2E, Delhi: PHI Learning, Private Ltd..
- Vigo, T. L. (1994) *Textile Processing and Properties, Preparation, Dyeing, Finishing and Performance*, Amsterdam: Elsevier Science B.V.

### Teaching Plan:

**Week 1:** Methods of application of textile finishes

**Week 2:** Requirement of different substrates for finish application

**Week 3:** Preparatory finishes for cellulosic fibers

**Week 4:** Preparatory finishes for protein fibers

**Week 5:** Preparatory finishes for man-made fibers, Softening finish

**Week 6:** Softening finish, stiffening finishes, Optical brightening agents

**Week 7:** Enzymatic finishing, Special Calendaring

**Week 8:** Sueding, Peaching, Artificial leather, Water repellent finishes

**Week 9:** Soil and stain repellent finishes, Setting finishes, Durable press finishes

**Week 10:** Anti-static finishes, Flame retardant finishes, Anti-microbial finishes

**Week 11:** Moth proofing, UV protective finishes, Super hydrophobic finish, Coating and lamination

**Week 12:** Innovations in textile finishing

### Facilitating the Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the methods of application of finishes on different textile substrates	Unit transaction through audio-visual presentations, videos etc.	Quizzes, assignments, Open book tests
2.	Describe the preparatory finishes for various fabrics	Unit transaction through audio-visual presentations, videos, Industrial visits.	Quizzes, assignments, Visit reports.
3.	Understand the chemistry and mechanism of action of application of various finishes	Unit transaction through projected visual explanations, fabric samples	Assignments, Open book tests, Quizzes
4.	Understand the chemistry and mechanism of action of application of various finishes	Unit transaction through projected visual explanations, fabric samples	Assignments, Open book tests, Quizzes
5.	Gain awareness of new advancements in the area of finishing.	Unit transaction through projected visual explanations, fabric samples, Industrial visits, Market surveys.	Assignments, Market survey reports

## TEXTILE FINISHING AND EVALUATION PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

To enable the students to successfully apply various textile finishes on different fabrics and to evaluate the effect of these finishes application on fabric properties.

### **Course Learning Outcomes:**

1. Apply various textile finishes.
2. Evaluate the effectiveness of a textile finishing process.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Application of Preparatory finishes on cellulose** **20**

- Evaluation of fabrics desized with various desizing methods/agents in terms of weight loss, absorption time and wettability and appearance.
- Evaluation of fabrics scoured with various scouring methods/ agents in terms of absorption time and wettability.
- Application of various bleaching agents on different fibers and their evaluation in terms of whiteness index and strength.
- Mercerisation of cellulosic fabrics with and without tension and their evaluation in terms of dimensional stability, strength, luster and dyeability.

#### **UNIT II: Application of finishes that alter Handle** **2**

- Application of softening agents on fabrics and their evaluation in terms of bending length
- Application of stiffening agents on fabrics and their evaluation in terms of bending length.

#### **UNIT III: Application of Functional finishes** **5**

- Application of various flame retarding agents and their evaluation in terms of flaming time and char length.
- Application of suitable water repellent and oil repellent finishes on different fibers and their evaluation in terms of wettability, water and oil repellency.
- Application of anti-creasing finishes and evaluation of their efficacy in terms of crease recovery angle, tensile strength and tear strength.
- Application of Chlorination finish on wool and its effect on dimensional stability and dyeability.

### **Suggested Readings:**

- Marsh, J.T. (1979) *An Introduction to Textile Finishing*, Bombay: B.I. Publications
- Rouette, H.K. (2001) *Encyclopedia of Textile Finishing*, Volumes 1 to 3, Berlin: Springer
- Schindler, W.D. and Hauser, P.J. (2004) *Chemical Finishing of Textiles*, The Textile Institute, England: Woodhead Publishing Ltd.
- Trotman, E. R. (1984) *Dyeing and Chemical Technology of Fibers*, Sixth Edition, England: Charles Griffin and Company Ltd.

- Vigo, T. L. (1994) *Textile Processing and Properties, Preparation, Dyeing, Finishing and Performance*, Amsterdam: Elsevier Science B.V.

## **TEXTILE DESIGN DEVELOPMENT AND COMPUTER APPLICATION PRACTICAL**

**Marks: 100**

**Duration: 6 Hrs.**

### **Course Objectives:**

The course aims to develop creative skills for design development and provide practical training in computer applications to undertake design projects.

### **Course Learning Outcomes:**

1. Understand the fundamentals of design process
2. Learn to conceptualize design and its implementation
3. Acquire skills in developing motif and pattern placements
4. Use software tools to develop designs

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Understanding of Design Process**

**8**

- Theme-board
- Mood-board
- Colour Board and their relations
- Selection of a theme
- Development of Theme-board using cutting and pasting techniques

#### **UNIT II: Computer Applications**

**16**

- Introduction to Corel Draw and its tools
- Fashioning Moodboard using Corel Draw
- Creating Colour Palette using Corel Draw

#### **UNIT III: Motif Development**

**24**

- Sketching of live object
- Motif Development
- Stylizing it in natural, abstract, geometric and ornamental forms
- Tracing of motif using software tools

#### **UNIT IV: Conceptualization of motif through CAD**

**24**

- Big & small
- Enlargement & reduction
- Motif Repeats

#### **UNIT V: Design Developments/ Layouts through CAD**

**24**

- Border
- All over patterns
- Engineered patterns

- Product Development

**Suggested Readings:**

- Duggal, V. A (2002) *General Guide to Computer Aided Design and Drafting*, New York: MailmaxPublications.
- Grosicki, Z.J. (1989) *Advanced Textile Design (4th Ed) - Watson's*, London: Newness Butterworths.
- Meller, S. and Eiffer J. (1991) *Textile Design*, London: Thames and Hudson.
- Wilson E. (1994) *8000 Years of Ornament*, London: the British Museum Press.
- Aspelund, K. (2014) *Design Process*, Fairchild - Bloomsbury Publication, 3<sup>rd</sup> Edition.
- <https://www.coreldraw.com/en/pages/800382.htm>, Corel Draw Tutorials.

**Teaching Plan:**

**Week 1:** Introduction to Textile Design Development through design process

**Week 2:** Development of theme board

**Week 3:** Introduction of Corel Draw and its tool

**Week 4:** Development of Mood board and colour palette on CAD

**Week 5:** Sketching of live object based on chosen theme

**Week 6:** Motif development based on natural abstract, geometric and ornamental styles

**Week 7:** Tracing of motif on CorelDraw

**Week 8:** Stylizing motif in different sizes through CAD

**Week 9:** Conceptualizing motif in different repeats CAD

**Week 10:** Make ready repeats with colours from the colour palette

**Week 11 and 12:** Designing different layouts with chosen motif like all over, with border and engineered

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understanding of design process	Presentations  Discussion	Doing hands on for developing theme boards Use pictures, materials available in nature, man made materials to create a theme board
2.	Learn to conceptualize design and its implementation	Discussion  Demonstration on Corel Draw  Drawing by hand  Using software	Developing Moodboard and Colour palette   Sketched live objects  Stylize the motifs

3.	Acquire skills in developing motif and pattern placements	Using software	Doing hands on the tools Creating 8 different patterns using various repeat patterns
4.	Use computer skill as a tool to develop designs	Discussion Print media	Printouts of the layouts based on theme using colour palette

## FASHION MERCHANDISE AND RETAIL THEORY

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

The course aims to facilitate understanding of the concepts of Merchandising and Retailing. It provides a comprehensive insight into the principles of merchandise management, assortment planning and various components of a retail store.

### **Course Learning Outcomes:**

1. Knowledge of merchandising activities in a retail setup
2. Manage stakeholders involved in retailing

## **CONTENTS**

## **PERIODS**

### **UNIT I: Introduction to Fashion Retailing**

**8**

- Retail environment and trends
- Global impact of retail
- Types of retailers
- Retail location
- Site selection and trade area analysis

### **UNIT II: Retail Promotion**

**8**

- Tools of promotion-Advertising, Sales promotion, personal selling
- Classification and dynamics of fashion consumer
- Customer Relationship Management

### **UNIT III: Managing Merchandise Assortments**

**10**

- Merchandise management planning
- Category Life Cycle
- Developing an assortment plan
- Setting inventory and product availability levels
- Merchandise planning systems
- Allocating merchandise to stores

### **UNIT IV: Buying Merchandise**

**8**

- Types of brands- National or Private labels

- Buying in brands- meeting and negotiating with vendors
- Tips for effective negotiating
- Legal and ethical issues
- Buying private label merchandise

### **UNIT V: Retail Pricing**

**8**

- Considerations in setting price
- Legal and ethical issues
- Setting retail prices
- Initial Mark-up and maintained Mark-up
- Pricing strategies

### **UNIT VI: Store Management**

**6**

- Store Layout and design
- Visual Merchandising

### **Suggested Readings:**

- ClarkJ. (2014)*Fashion Merchandising Principles and practice*,Suffolk:Lavenham press ltd.
- Diamond, J., Diamond, E. and Litt, S.D. (2006)*Fashion Retailing- A Multi- Channel Approach*: Bloomsbury Publishing Inc.
- Jain, J.N. and Singh, P.P. (2007)*Modern Marketing Management- Principles and Techniques*. New Delhi: Regal Publications.
- Kotler, P., Keller, K.L., Koshy, A. and Jha, M. (2012)*Marketing Management*14<sup>th</sup>ed.: Pearson.
- Kunz,I, and Grace 3<sup>rd</sup>ed.( 2009 )*Merchandising*, New York:Fairchild publications, Inc.
- Levy, M,Weitz, B.A. and Pandit, A. (2008)*Retailing Management*,Delhi:Tata McGraw Hill Education Private Limited.
- Pegler, M. (2006)*Visual Merchandising and Display*, New York: Fairchild Publications Inc.
- Posner, H. (2015)*Marketing Fashion –Strategy, Branding and promotion*, 2<sup>nd</sup> ed., Laurence King Publishing.

### **Teaching Plan:**

**Week 1:** Global Trends inRetail environmentand Types of retailers

**Week 2:** Retail location, Site selection and trade area analysis

**Week 3:**Retail Promotion - Advertising,Sales promotion and Personal selling

**Week 4:**Customer Relationship Managementand fashion consumer

**Week 5:**Merchandise management planning

**Week 6:** Assortment planning and allocation

**Week 7:** Buying systems, national and private labels

**Week 8:** Negotiation with buyers

**Week 9:** Retail Pricing- Setting retail prices

**Week 10:** Pricing strategies

**Week 11:** Store Layout, designand Visual Merchandising

**Week 12:** Presentations

### Facilitating the Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understanding global trends in retailing  Importance of retail location and considerations in site selection	Lecture mode	Assessment will cover both theoretical and practical aspects of learning
2.	Understanding the use and characteristics of various tools of promotion	Lecture and videos	Report on Promotion strategy of any prominent Apparel/textile brand
3.	Understanding merchandise planning systems and assortment planning	Lecture mode and visit to various retail formats	Projects, reports and/or presentation
4.	Understanding various buying systems- national and private label Merchandise	Lecture	Quiz
5.	Understanding considerations in price setting and various pricing strategies	Lecture	Assessment will cover both theoretical and practical aspects of learning
6.	Understanding the concept of store design, store layout and visual merchandising	Lecture mode  Visit to various retail set-ups  Presentations	Presentation by students on Visual merchandising-Case study of an outlet  Formative and summative feedback to the students

### ADVANCED PATTERN MAKING & GARMENT CONSTRUCTION PRACTICAL

**Marks: 100**

**Duration: 6 Hrs.**

#### Course Objectives:

To develop skills in methods of draping fabric to obtain patterns for different styles of bodices, skirts and dresses with bodice skirt combinations and dresses without waistline seams, along with the developing and constructional knowledge of collars and sleeves and various other garment components.

#### Course Learning Outcomes:

1. Style read a given design and prepare the body-form and fabric for the same.
2. Create basic blocks like, bodice, skirt and torso using draping method.
3. Develop styles in bodice and skirts
4. Successfully sew dresses for self

## CONTENTS

## PERIODS

### UNIT I: Preparatory Steps for Draping

8

- Preparing the body-form
- Tools and supplies
- Calculating the fabric requirements
- Fabric preparation
- Terminology

### UNIT II: Pattern Development

56

- Draping the basic bodice
- Developing styles in bodice patterns
- Developing collar patterns using flat pattern method and draping( peter-pan variations on altered necklines, sailors, one- piece stand and fall,two piece stand and fall Flat shawl collar)
- Developing sleeves (shirtmaker, bishop, raglan, saddler, drop-shoulder)
- Draping a basic skirt block
- Developing styles in skirt patterns through flat pattern and draping( adding pleats, flares, yokes, panels, circularity, asymmetry, wrap-overs)
- Developing the torso length block using flat pattern method ( fitted, semi fitted and boxy)
- Adapting torso block to foundation dresses : A-line dress, flared dress, princess-line, panelled and tent
- Incorporating more design detail : pockets, plackets, waistbands, belts, slits, vents, frills ruffles godets, gussets, peplums)

### UNIT III: Garment Construction

32

- Converting draped patterns to commercial patterns on paper
- Grading the patterns
- Samples of pockets(single welt and double welt pocket)
- Designing and Construction of any styled skirt, skirt top and a dress with collar, sleeves, pocket and additional components to create design interest ( for self or body-form)

### Suggested Readings:

- Armstrong, Helen Joseph. (2000) *Pattern Making for Fashion Design, 4<sup>th</sup> ed.*
- Pearson Crawford Connie Amaden. (1989) *The Art of Fashion draping, 2<sup>nd</sup> ed.* New York: Education Ptc. Ltd. Fairchild Publications.
- Jaffe Hilde and Nuric Relic. (1993) *Draping for Fashion Design*, New Jersey: Fashion Institute of Technology.

### Teaching Plan:

**Week 1:** Learning and implementing the preparatory steps

**Week 2-3:** Draping the bodice front and back (basic dart positions and variations, dart substitutes)

**Week 4:** Developing styles in bodice patterns- Princess-line, Empire line, adding yokes and style-lines,

**Week 5-6:** Developing the basic skirt front & back and silhouettes in skirts- A-line, Flared, additional flare, gathered and pleated skirt, adding fullness (vertical, horizontal and radial)

**Week 7-8:** Developing the torso length blocks ( fitted, semi fitted and boxy fit), foundation dresses

**Week 9:** Grading the basic skirt and torso block

**Week 10 -12:** Garment construction: Construction and presentation of any two dresses learnt with collar and sleeve.

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	To calculate and assess requirements for draping for creating a design	Discussion	Evaluating the calculations done for draping a particular design
2.	To create basic blocks using draping	Demonstration	Assessing the blocks prepared
3.	To develop styles in bodice and skirts	Discussion and Demonstration	Assessing the developed styles
4.	To successfully sew a dress for self	Demonstration and hands on practice	Evaluating the dress in terms of workmanship

**FABRICS FOR INTERIORS  
THEORY**

**Marks: 50**

**Duration: 2 Hrs.**

**Course Objectives:**

The course aims to acquire knowledge on selection parameters and role of textiles in interiors. To study the different types of design details and fabrics used for interiors. To understand the emerging trends and advancements in textiles used for interiors.

**Course Learning Outcomes:**

1. Classify the textiles used for interiors and describe their selection criteria.
2. Identify and name the fabrics based on different methods of design variation in textiles for interiors.
3. Apply the understanding of future forecast and advanced technology in designing interiors for different room types.
4. Discuss the growing market for home & hospitality and the major production centres in India.

**CONTENTS**

**PERIODS**

**UNIT I: Introduction and Selection of Textiles for Interiors**

**10**

- Classification of textiles for interiors (hard and soft): upholstery fabrics, window textiles, bed linen and other bed textiles, bathroom textiles, kitchen and table linen, floor coverings-rugs

and carpets

- History and role of fabrics in furnishing of interiors
- Period styles in furnishing of interiors
- Various parameters for selecting textiles for interiors (types, standard sizes, construction, performance, durability, aesthetics, price range etc.)

## **UNIT II: Design Variation in Textiles for Interiors**

**8**

- Variation in structural design
  - By combining different types of yarns and their arrangements
  - By using weaves and its variations
  - By knitting and its variations
  - By felting and bonding (non-wovens)
  - By other methods of fabric construction like crochet, braiding, netting, laces etc.
- Variation in decorative design by dyeing, printing, painting, finishing, embroidery, appliqué etc.
- Factors affecting selection of design (end use, size and type of room, type of arrangement, type of furniture, geographical location etc.)

## **UNIT III: Role of Fashion, Technology and Economy on Textiles for Interiors**

**6**

- Contemporary fashion trends and forecast for the future
- Innovations in technology, high performance materials and use of finishes to enhance functionality
- Growing domestic market and major production centres
- Designers, Brands and Outlets dealing with furnishings for interiors

### **Suggested Readings:**

- Das, Subrata (2010) *Performance of Home Textiles*, New Delhi, Woodland Publishing India Pvt Ltd
- Howes, Karen (1997) *Making the Most of Bedrooms*, London, Conran Octopus
- Lebeau, Caroline (2004) *Fabrics- the Decorative Art of Textiles*, London, Thames and Hudson
- Neiswand, Nonie (1998) *Bedrooms and Bathrooms*, London, Conran Octopus
- Ranall, Charles T. (2002) *Encyclopedia of Window Fashions*, California, Randall International
- Wingate, Isabel B. (1949) *Textile Fabrics and Their Selection*, New York, Prentice Hall

### **Teaching Plan:**

**Week 1:** Classification, history and role of fabrics in furnishing of interiors

**Week 2:** Period styles in furnishing of interiors

**Week 3:** Various parameters for selecting textiles for interiors

**Week 4:** Various parameters for selecting textiles for interiors

**Week 5:** Market survey to furnishings outlets

**Week 6:** Variation in structural design

**Week 7:** Variation in decorative design

**Week 8:** Factors affecting selection of design

**Week 9:** Contemporary fashion trends, forecast for the future, innovations in technology

**Week 10:** Developing a swatch story for different room types as per the latest forecast and

knowledge of design variation in fabrics

**Week 11:** Growing domestic market and major production centres

**Week 12:** Designers, Brands and Outlets dealing with furnishings for interiors

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Classify the textiles used for interiors and describe their selection criteria.	Market survey to furnishings outlets (brands, sizes, variety, price range, informative labeling, special features etc.)	Presentation of market survey report by students
2	Identify and name the fabrics based on different methods of design variation in textiles for interiors.	Lecture / PPT & Fabric swatches / Group discussion	Quiz for assessing the level of understanding
2&3	Apply the understanding of future forecast and advanced technology in designing interiors for different room types.	Lecture / PPT / Group discussion	Developing a swatch story for different room types as per the latest forecast and knowledge of design variation in fabrics
3	Discuss the growing market for home & hospitality and the major production centres in India.	Lecture / Group discussion	Presentations by students on major production centres

**FABRIC STUDY AND IDENTIFICATION THEORY**

**Marks: 50**

**Duration: 2 Hrs.**

**Course Objectives:**

To course aims to deliver a preliminary understanding of the fabric components and enhance the learner's awareness of various commercially available fabrics along with an understanding of their properties and end uses.

**Course Learning Outcomes:**

1. Understand the components of a textile fabric.
2. Identify the various commercially available fabrics.
3. Appropriately select fabrics based on their properties, cost and recommended end uses.

## CONTENTS

## PERIODS

### UNIT I: Components of Fabric Structure

3

- Fibers and yarns
- Methods of construction
- Fabric finishing- dyeing, printing, aesthetic and functional finishes

### UNIT II: Commercially Important Woven Fabrics: Identification, Properties and End Uses

14

- Cotton and other Cellulosic Fiber Fabrics
  - Light weight fabrics- Mulmul, Voile, Organdy, etc.
  - Medium weight fabrics- Cambric, poplin, Cotton Rubia, Denim, Seer-sucker, Eyelash doobby, Shiffl, Jute, Linen, etc.
  - Heavy weight fabrics- Canvas, Casement, Gabardine, Damask, Corduroy, Velvet, Terry
- Silk and Wool fiber fabrics
  - Light weight fabrics- Silk Crepe, De'chine, Georgette, Chiffon, Organza
  - Medium/Heavy weight fabrics- Flat silk, Satin, Tafetta, Dupion, Shantung, Raw silk, Tussar silk, Habutai silk, Tweed, Wool twill
- Man-made fiber and blended fabrics- Art silk, Lizzy-Bizzy, Tery-voil, Semi-crepe, Moss crepe, Artificial chiffon, Artificial georgette, Terecot, Poly-satin, Lycra, Cotton Lycra, Viscose Lycra, Modal, Viscose

### UNIT III: Commercially Important Knitted and Non-Woven Fabrics: Identification, Properties and End Uses

4

- Knitted Fabrics- Knitted Terry, Jersey, Rib Knit, Interlock knit, Pique, Velour, Scuba, Fleece,
- Non-wovens- Different types and weights
- Others- Leatherette, Suede

### UNIT IV: Traditional Indian Fabrics: Identification, Properties and End Uses

3

Brocades, Tanchoi, Kimkhab, Ikat, Patola, Kalamkari, etc.

### Suggested Readings:

- Corbman P. B. (1989) *Textiles- Fiber to Fabric*, 6th edition, Mc Graw Hill, New York.
- Hollen N., Saddler J., Langford A.L., Kadolph S.J. (1988) *Textiles*, 6<sup>th</sup> Edition, Macmillan publishing Company New York, USA
- Joseph, M.L. (1988) *Essentials of Textiles*, 6<sup>th</sup> Edition, Florida: Holt, Rinehart and Winston Inc.
- Pizzoto's J.J. *Fabric Science*, 11<sup>th</sup> Edition, New York: Fairchild Publication.
- D. Rastogi (Ed.) and S. Chopra (Ed.) (2017) *Textile Science*, India: Orient Black Swan.
- Sekhri S. (2011) *Textbook of Fabric Science: Fundamentals to Finishing*, Delhi:PHI Learning.
- Tholia A. (2013) *Understanding Fabrics- A practical Approach*, 2<sup>nd</sup> edition, Sarv International.
- Wingate, Isabel B. (1949)*Textile Fabrics and Their Selection*, New York: Prentice Hall

**Teaching Plan:****Week 1:** Components of fabric structure: Fibers, construction techniques**Week 2:** Components of fabric structure: Dyeing, Printing, Finishing**Week 3:** Woven Fabrics- Light-weight cotton fabrics**Week 4:** Woven Fabrics- Medium weight cotton fabrics**Week 5:** Woven Fabrics- Medium weight cotton fabrics**Week 6:** Woven Fabrics- Heavy weight cotton fabrics**Week 7:** Woven Fabrics- Light-weight silk fabrics**Week 8:** Woven Fabrics- Medium and heavy weight silk/wool fabrics**Week 9:** Woven Fabrics- Man-made fiber and blended fabrics**Week 10:** Knitted Fabrics**Week 11:** Non-woven and other fabrics**Week 12:** Traditional Indian fabrics**Facilitating the achievement of Course Learning Outcomes:**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1	Understand the components of a textile fabric.	Unit transaction through audio-visual presentations, videos, lecture-demonstrations	Quizzes, assignments
2	Identify the various commercially available fabrics and appropriately select fabrics based on their properties, cost and recommended end uses.	Unit transaction through audio-visual presentations, Market visits, Sample analysis	Quizzes, assignments, Market surveys, Market visit reports, Swatch files
3	Identify the various commercially available fabrics and appropriately select fabrics based on their properties, cost and recommended end uses.	Unit transaction through projected visual explanations, fabric samples.	Swatch files, Swatch analysis, market analysis, Market survey reports.
4	Identify the various commercially available fabrics and appropriately select fabrics based on their properties, cost and recommended end uses.	Unit transaction through projected visual explanations, fabric sample analysis.	Assignments, swatch collections, Comparative market surveys.

## **SEMESTER III**

<b>SEMESTER III</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 10 FASCC301: Quality Assurance in Textiles and Apparel	4			4
Core course 11 FASCC302: Dyeing, Printing and Colour Measurement	4			4
Core course 12 Integrated Practical FASCC303: Dyeing, Printing and Colour Measurement		4		
Core course 13 FASCC304: Internship		2		2
Core course 14 FASCC305: Technical Writing and Seminar		2		2
Total credits in core course	16			
<b>Number of elective courses</b>	<b>Credits in each Elective course</b>			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 1	4	2		6
Elective course 2	4	2		6
Total credits in elective courses	12			
<b>Total credits in Semester III</b>	<b>28</b>			

**Elective Courses: Select any two of the following:**

- FASEC301-World Textiles: Techniques and Design
- FASEC302- Psychology of Fashion
- FASEC303- Women's Wear
- FASEC304- Sustainability in Textiles and Fashion Industry
- FASEC305-Marketing Management

# QUALITY ASSURANCE IN TEXTILE AND APPAREL THEORY

**Marks: 100**

**Duration: 3 Hrs**

## **Course Objectives:**

The course aims to impart awareness about the need, scope and process of quality assurance. It aims to impart knowledge about the various standards, quality marks and labels in textiles and apparel.

## **Course Learning Outcomes:**

1. Acquire technical expertise in identifying tests suitable for fibers, yarns and fabrics.
2. Apply different tests on fibers, yarns and fabrics.

## **CONTENTS**

## **PERIODS**

### **UNIT 1: Concept and scope of Quality in Fabrics and Apparel**

**8**

- Concept and scope of quality in fabrics and apparel
- Definition and dimensions of Quality
- Standards and Specifications

### **UNIT II: Quality Control Organizations, Standards and Regulations**

**8**

- AATCC, ISO, ASTM, INDA, BIS and GINTEX
- Eco-mark, Silk mark, Wool mark, Handloom mark
- Care labels, Fiber ID labels, Environment labels

### **UNIT III: Assurance of Quality in Textiles**

**20**

- **Fiber**
  - Identification and testing
  - Fiber length, evenness, fineness, crimp and Moisture regain and their implication on quality
- **Yarn**
  - Appearance and grading
  - Yarn count, tensile strength, Elongation and elastic recovery
  - Twist, crimp, fineness, uniformity – standards and their implications on quality
- **Fabric**
  - Strength properties – tensile, bursting and tear
  - Color fastness properties
  - Dimensional Stability
  - Performance properties – drape, resistance to abrasion, pilling, creasing, bending, and Flammability

### **UNIT IV: Inspection and managing quality**

**12**

- Fabric Inspection procedure
- Fabric defects- Woven and Knitted
- Evaluating garment quality

- Components of garments
- Critical control points
- Tools for managing quality

### **Suggested Readings:**

- Bhardwaj, S.K. and Mehta, P.V (1998), *Managing Quality in the Apparel Industry*, New Delhi: New Age International.
- Booth, J. E (1996), *Principle of Textile Testing*, CBS Publishers & Distributors Pvt. Ltd.
- Hearle, J.W.S. and Peters, R.H. (1975), *The Physical Testing of Textile Fibers*, Heinmann: The Textile Institute.
- Kadolph, S.J (1998), *Quality Assurance of Textiles and Apparel*, New York: Fairchild Publication.
- Kothari, V.K., Behera, B.K (1996), *Quality Control in Textiles and Apparel Industry A&B*, Department of Textile Technology, Delhi: IAFL Publications.
- Morton W.E. and Hearle J.W.S. (2008), *Physical Properties of Textile Fibers*, The Textile Institute, Cambridge: Woodhead Publishing Limited.
- Saville, B.P (1999), *Physical Testing of Textiles*, The Textile Institute, Cambridge: Woodhead Publishing Limited.
- Stamper, A. Sharp, S.H. and Donnell, L.B (2005), *Evaluating Apparel Quality*, (2nd ed.), New York: Fairchild Publication.

### **Teaching Plan:**

**Week 1:** Concept and scope of Quality in Fabrics and Apparel, Definition and dimensions of Quality

**Week 2:** Standards and Specifications, Quality control organizations

**Week 3:** Quality Control organizations, standards and regulations, AATCC, ISO, ASTM, INDA, BIS and GINTEX

**Week 4:** INDA, BIS and GINTEX, Eco-labels

**Week 5:** Silk mark, wool mark, handloom mark, Assurance of Quality

**Week 6:** Fiber - Identification and testing, fiber length, evenness, fineness, crimp

**Week 7:** Moisture regain and their implication on quality, Yarn- Appearance and grading

**Week 8:** Yarn count and tensile strength, elongation and elastic recovery, twist, crimp, fineness, uniformity – standards and their implications on quality

**Week 9:** Strength properties – tensile, bursting and tear, fabric color fastness properties, dimensional stability

**Week 10:** Fabric Performance properties – resistance to abrasion, pilling, wrinkling and burning, Inspection and managing quality, Fabric inspection procedure

**Week 11:** Fabric defects – Woven and knitted, Evaluating garment quality, Components of garments

**Week 12:** Critical control points, Tools for managing quality

### Facilitating the Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	<p>Students will develop:</p> <p>Basic understanding of quality</p> <p>Application of quality in textile and apparel</p>	<p>Unit transaction through power presentation, group discussion</p>	<p>Assignment, Projects, Quizzes, reports and presentations, individually and/or in groups.</p>
2.	<p>Students will develop:</p> <p>Understanding of standards and regulations</p> <p>Knowledge of quality control organizations</p>	<p>Presentation, group discussion and team work.</p>	<p>Projects, Quizzes, reports and presentations, individually and/or in groups.</p>
3.	<p>Students will develop:</p> <p>Understanding of fiber, yarn and fabric</p> <p>Technical knowledge of different test</p> <p>Apply different tests on fiber, yarn and fabric</p> <p>Knowledge of: technical expertise in identifying test suitable for fiber, yarn and fabric</p>	<p>Unit transaction through power point presentation, practical demonstration, relevant videos of different tests ,group discussion</p>	<p>Assignment, Projects, Quizzes, reports and presentations, individually and/or in groups.</p>
4.	<p>Student will be able to check the quality of the Fabric</p> <p>Knowledge of: technical expertise in design review</p> <p>Knowledge of: technical expertise in identifying defects</p> <p>Ability to: evaluate the quality of components of a garments</p>	<p>Unit transaction through power presentation, Videos and fabric samples and Industrial visits</p>	<p>Case study, projects, reports and presentations, individually and/or in groups.</p>

# DYEING, PRINTING AND COLOUR MEASUREMENT THEORY

**Marks: 100**

**Duration: 3 Hrs.**

## **Course Objectives:**

To provide the students understanding of the concept of colour and its measurement. To provide the knowledge and understanding of the theories, mechanism and use of various dyes and auxiliaries for dyeing and printing of textile substrates.

## **Course Learning Outcomes:**

1. Understand the concept of colour and its measurement techniques.
2. Describe the process of dyeing of various fibers with different dyes.
3. Understand the mechanism of dyeing with different dyes.
4. Describe the methods and styles of printing.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Color Specification and Measurement**

**4**

- Colour theory, Colour strength, Optical density, K/S,  $L^*a^*b^*$ ,  $L^*c^*h^*$  values, Metamerism
- Computer color matching system

### **UNIT II: Dyeing**

**16**

- Dye-fiber interaction
- Role of fiber structure in dyeing
- Theories of dyeing - kinetics and thermodynamics
- Application of dyes on various substrates
  - Mechanism of dyeing for various dye-fiber systems
  - Effect of dyeing parameters and auxiliaries
  - Dyeing of blends
- Dyeing defects

### **UNIT III: Dyeing Machines**

**5**

- Machines used for dyeing at the cottage and industrial level for fiber, yarn and fabric

### **UNIT IV: Chemistry and use of dyeing and printing auxiliaries**

**4**

- Water, wetting agents, electrolytes, solvents, dispersing agents, oxidizing and reducing agents, cationic fixing agents, sequestering agents, retarding agents, carriers, hygroscopic agents, stabilizers, discharging agents etc.
- Thickening agents- natural, modified and synthetic

### **UNIT V: Printing**

**16**

- Methods of printing: Printing with block, roller, screen (flat bed, rotary), transfer, digital, flock, laser
- New developments in printing machines
- Styles of printing
  - Direct style, dyed style, resist or reserve style, discharge style
  - Application of various classes of dyes on different fibers

- Finishing and after treatment of printed goods
- Printing defects

### UNIT VI: Color fastness of dyed and printed goods

3

- Effect of washing, perspiration, crocking, light, dry-cleaning and bleaches

#### Suggested Readings:

- Aspland J. R., (1997) *Textile Dyeing and Colouration*, NC: AATCC.
- Clarke, W. (1977) *An Introduction to Textile Printing*, London: Butterworth and Co. Ltd.
- Rastogi, D. and Chopra, S.(Eds.) (2017)*Textile science*, India: Orient Black Swan Publishing Limited
- Miles, L.W.C. (1994) *Textile Printing*, 2nd ed., West Yorkshire: Society of Dyers and Colorists, England.
- Shenai, V.A. (1987) *Chemistry of Dyes and Principles of Dyeing*, Vol II, Bombay:Sevak Publications.
- Shore, John (Ed) (1990) *Colorants and Auxiliaries: Organic Chemistry and Application Properties*, Vol. 1 & 2, West Yorkshire: Society of Dyers and Colorists, England.
- Trotman, E. R. (1984) *Dyeing and Chemical Technology of fibers*, Sixth edition,England:Charles Griffin and Company Ltd.

#### Teaching Plan:

**Week 1:** Color specification and measurement

**Week 2:** Dye fiber interaction, Role of fiber structure in dyeing, Theories of dyeing, Mechanism of dyeing for various dye-fiber systems, Effect of dyeing parameters and auxiliaries, Dyeing of blends

**Week 3:** Application of dyes on various substrates: Direct, Reactive Azoic

**Week 4:** Application of dyes on various substrates: Sulphur, Vat, Acid

**Week 5:** Application of dyes on various substrates: Basic, Mordant, Disperse

**Week 6:** Dyeing of blends, Mass colouration, Dyeing defects

**Week 7:** Dyeing machines, Dyeing auxiliaries

**Week 8:** Methods of printing: Block and Roller

**Week 9:** Screen printing-flatbed, rotary, Transfer, digital, flock, laser printing, new developments

**Week 10:** Styles of printing: Direct style, Resist or Reserve style

**Week11:** Discharge style, Dyed style

**Week 12:** Finishing and after treatment of printed goods, Printing defects, Printing auxiliaries

**Week 13:** Color fastness of dyed and printed goods-Effect of washing, perspiration, crocking, light, dry-cleaning and bleaches

#### Facilitating the Achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Student will be able to understand the concept of colour and its measurement	<ul style="list-style-type: none"> <li>• Lectures, Powerpoint presentation</li> <li>• Visit to IIT Delhi/</li> </ul>	<ul style="list-style-type: none"> <li>• Report of visits</li> <li>• Periodical quizzes</li> </ul>

	techniques	NITRA	
2.	Describe the process of dyeing of various fibers with different dyes.	Lectures, Powerpoint presentation Industrial visit	Assignment and presentations
3.	Understand the various machines, their principles of dyeing textile fibers	Lectures, powerpoint presentation Industrial visit	Assignment and presentations
4.	Understand the role of various chemicals and auxiliaries being used for dyeing and printing	Lectures, powerpoint presentation	Quiz, Assignment
5.	Understand the methods and styles of printing.	Lectures, powerpoint presentation Industrial visit to printing units	Catalogue of samples of various kinds of printing on different textile substrates
6.	Understand the assessment of colour fastness of dyes and printed textile substrates	Demonstration of samples	Project on catalogue of samples

### **DYEING, PRINTING AND COLOUR MEASUREMENT PRACTICAL**

**Marks: 100**

**Duration: 6 Hrs.**

**Course Objectives:**

To enable the students to measure and interpret colour values of dyed and printed goods. The students should be able to dye and print natural and manmade fibers with different classes of dyes and evaluate the effect of various dyes and auxiliaries on color yield and dyeing quality.

**Course Learning Outcomes:**

1. Apply various dyes on yarns/ fabrics of different fibers and fiber blends
2. Print textile fabrics in different styles using suitable dyes
3. Evaluate the colour by using computer colour matching system
4. Evaluate the colour fastness properties

**CONTENTS**

**PERIODS**

**UNIT I: Colour measurement and its interpretation using computer colour matching system**      **4**

**UNIT II: Dyeing of yarns/ fabrics of different fibers and fiber blends**      **36**

- Application of various dyes
- Dyeing with natural dyes and mordants
- Effect of dyeing parameters and their evaluation using spectrophotometer

**UNIT III: Printing in different styles using suitable dyes** **48**

- Direct style: direct, reactive, azoic, vat, acid, printing with pigments
- Discharge style
- Resist style
- Transfer printing.

**UNIT IV: Colour fastness assessment** **8**

- Wash fastness assessment
- Light fastness assessment
- Crock fastness assessment
- Perspiration fastness

**Suggested Readings:**

- Aspland J. R., (1997) *Textile Dyeing and Colouration*, NC: AATCC.
- Clarke, W. (1977) *An Introduction to Textile Printing*, London: Butterworth and Co. Ltd
- Duff, D.G. and Sinclair, R.F. (eds.) (1989), *Gile's Laboratory Course in Dyeing*, 4<sup>th</sup> Edition, West Yorkshire: Society of Dyers and Colourists, England.
- Miles, L.W.C. (1994) *Textile Printing*, 2nd ed., West Yorkshire: Society of Dyers and Colourists, England.
- Rastogi, D. and Chopra, S. (Eds.) (2017) *Textile science*, India: Orient Black Swan Publishing Limited.
- Shenai, V.A. (1987) *Chemistry of Dyes and Principles of Dyeing*, Vol II, Bombay: Sevak Publications.
- Shore, John (Ed) (1990) *Colorants and Auxiliaries: Organic Chemistry and Application Properties*, Vol. 1 & 2, West Yorkshire: Society of Dyers and Colorists.
- Trotman, E. R. (1984) *Dyeing and Chemical Technology of fibers*, Sixth edition, England: Charles Griffin and Company Ltd.

**Teaching Plan:**

**Week 1:** Demonstration of computer colour matching system, Dye cotton using direct dyes

**Week 2:** Apply reactive dyes on cotton, wool and silk, Apply vat dyes on cotton

**Week 3:** Dye cotton using azoic dyes, Apply sulphur dyes on cotton

**Week 4:** Apply disperse dyes on polyester using different methods, Apply Basic dyes on cotton and acrylic

**Week 5:** Dye wool and silk with acid dyes, Dyeing of blends

**Week 6:** Revision

**Week 7:** Demonstration of printing methods, Print cotton using azoic colours.

**Week 8:** Print cotton fabric with reactive dyes, Discharge print direct, reactive, and azoic dyed cotton fabric

**Week 9:** Colour fastness measurement

**Week 10:** Colour fastness measurement

**Week 11:** Revision

**Week 12:** Revision

**Facilitating the Achievement of Course Learning Outcomes:**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
<b>1.</b>	Evaluate the colour by using computer colour matching system	Practical demonstrations and hands on practical application	Ability to work independently and follow instructions  Scientific understanding and analysis of the results obtained
<b>2.</b>	Apply various dyes on yarns/ fabrics of different fibers and fiber blends	Practical demonstrations and hands on practical application	Ability to work independently and follow instructions  Scientific understanding and analysis of the results Obtained  Quiz based on chemicals & auxiliaries used
<b>3.</b>	Print textile fabrics in different styles using suitable dyes	Practical demonstrations and hands on practical application	Ability to work independently and follow instructions  Scientific understanding and analysis of the results obtained  Quiz based on chemicals & auxiliaries used
<b>4.</b>	Evaluate the colour fastness properties	Practical demonstrations and hands on practical application	Ability to work independently and follow instructions  Scientific understanding and analysis of the results obtained

## **INTERNSHIP**

### **Course Objectives:**

To gain hands-on experience of working in various settings linked with issues in Development Communication and Extension.

### **Course Learning outcomes:**

Student will be able to -

1. Get hands on experience of real field setting.
2. Understanding of the issues and strategies organizations work on.
3. Opportunity to use communication skills for personal and professional development.
4. Enhanced ability to work with groups and use managerial and problem solving skills.

### **Description:**

The student will be required to undergo a field placement for a total duration of 4-6 weeks in their chosen area of interest after the Semester II and prior to Semester III. Depending on the interest of the students the setting may be export houses, buying houses, research organizations, testing labs, museums, conservation organizations, designers and many more. Institutions/organizations chosen should be of good professional standing. The student must participate in the on-going activities of the agency/ establishment, acquire skills and knowledge, gather information and prepare a report to be presented in the department after the completion of the placement period.

## **TECHNICAL WRITING & SEMINAR**

### **PRACTICAL**

**Marks : 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

To understand the nuances of scientific writing and develop skills in collation and presentation of scientific information along with learning the process of developing a research proposal/ project proposal

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### **Course Learning Outcomes:**

Student will be able to -

1. Demonstrate knowledge of scientific writing method and styles
2. Develop a research design on a topic relevant to their field
3. Prepare a systematic literature review on a select topic
4. Present a seminar of the literature review

The practical will have three components. Based on option of students for either dissertation or project work, due emphasis will be provided.

#### **A) Research design / Project proposal 12**

- Under the guidance of supervisor allocated prepare a research design / project proposal

#### **B) Skills in Technical Writing 24**

- Learn the nuances of select technical writing styles/ guides

- Analyze technical posters of researches in the fields
- Analyze dissertations, research reports and project evaluation reports and their presentations

### C) Review of Literature & Seminar

12

- Prepare a literature review on a select topic using an approved style guide
- Conduct Plagiarism check of document prepared
- Present an oral seminar on the topic

#### Suggested Readings:

- Alley, M. (2018) *The Craft of Scientific Writing*. New York: Springer.
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.
- Blum, D., Knudson M., and Henig, R. M. (2005) *Field Guide for Science Writers: The Official Guide of the National Association of Science Writers*. USA; Oxford University Press.  
<http://www.nasw.org/field-guide>
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Katz, M. (2009) *From Research to Manuscript: A Guide to Scientific Writing (2<sup>nd</sup> Ed)*. New York : Springer
- <http://www.apastyle.org/>
- <http://www.citethisforme.com/guides>

#### Facilitating the achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	<b>Week 1 2 &amp; 3</b> Demonstrate knowledge of scientific writing method and styles	Students oriented the nuances of select technical writing styles/ guides Analyze technical posters of researches in the fields Analyze dissertations, research reports and project evaluation reports Videos on scientific writing shown	Quiz and exercises will be given to students
2	<b>Week 3 4 5 6 7 &amp; 8</b> Develop a research design on a topic relevant to their field	Along with allocated supervisors students will work	Students submit the research design to

		on deciding a topic of research, review literature and develop an appropriate research design	technical review board for review and comments
3.	<b>Week 9&amp; 10</b> Prepare a systematic literature review on a select topic	Students collate the literature review done about their research topic selected and prepare a document based on it.  Students review old seminar documents and critique their presentation	Students literature review document reviewed by seminar committee  Plagiarism test done of final document
3.	<b>Week 11&amp; 12</b> Present a Seminar based on the literature review done	Students watch videos of seminar presentations and critique them.  Prepare a seminar presentation	Students presentations evaluated by the departmental seminar committee

## **WORLD TEXTILES: TECHNIQUES AND DESIGN THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objective:**

The course aims to create awareness and foster appreciation of textile techniques and developments in the world that describes the history of human acumen.

### **Course Learning Outcomes:**

1. Understand key techniques in the textile history and apply these to the identification of textiles
2. Understand the beginnings of the textile industry in ancient civilizations.
3. Recognize and appreciate the design effects in textile masterpieces of the world.
4. Analyze the social, cultural milieu and technological advancements as communicated by textiles
5. Gain awareness of art movements

### **CONTENTS**

### **PERIODS**

#### **UNIT 1 : Development of tools and techniques of production with respect to different civilizations and nations**

**8**

- Felt and bark cloth
- Plaiting and basketry
- Spinning
- Weaving

- Tapestry and rug weaving
- Knitting
- Netting knotting and crochet
- Embroidery
- Dyeing and printing

**UNIT II: Beginnings of the textile industry in ancient civilizations** **10**

- Mesopotamia
- Egypt
- Persia
- Greece
- Rome
- China
- India

**UNIT III: Study of master pieces of world textiles Part I: Structural designs** **12**

(With respect to history, construction techniques, styles colors, motifs and centre of production)

- Brocades (China, India, Persia, Byzantium, Spain, Italy and France)
- Tapestries (Greece, Coptic, Europe, Peru)
- Carpets and flooring (middle and Far East)
- Shawls (India, England, France)
- Laces (Europe)
- Linen damasks (Ireland and Belgium)

**UNIT IV: Study of master pieces of world textiles Part II: Applied design** **12**

(With respect to history, construction techniques, styles colors, motifs and centre of production)

- Resist dyed fabrics (India, Indonesia and Japan)
- Printed textiles (India, France and England)
- Embroideries (China, Persia and England)

**UNIT V: Art and Craft Movements** **6**

- Influence of Art Movements on textile design
- Art Deco, Art Nouveau, Bauhaus, Cubism, Futurism, Fauvism

**Suggested Readings:**

- Annemarie Seiler- Baldinger (1979) *Classification of Textile Techniques*, Ahmedabad, India, Calico Museum of India.
- Gillow John and Sentence Bryan (1999) *World Textiles*, London, Thames And Hudson
- Ginsburg, Madeleine (Ed)(1993) *Illustrated history Of Textiles*, London Studio Edition.
- Harris, Jennifer (Ed)(1993)*Textiles- 5000 Years*, London, British Museum Press.
- Lewis,E.(1953) *Romance Of Textile*, New York,, The McMillan Company

**Teaching Plan:**

**Week 1:** Development of tools and techniques of production of the following with respect to different civilizations and nations - Felt and bark cloth, Plaiting and basketry, Spinning and Weaving

**Week 2:** Development of tools and techniques of production of the following with respect to different civilizations and nations. Tapestry and rug weaving, Knitting, Netting, Knotting and Crochet, Embroidery and Dyeing and Printing

**Week 3, 4, 5 :** Beginnings of the textile industry in ancient civilizations- Mesopotamia, Egypt and Persia , Greece, Rome, China and India

**Week 6:** Study of Master pieces of World textiles Part I: Structural Design (With respect to history, construction techniques, styles, colors, motifs and center of production) Brocades of China, India, Persia, Byzantium, Spain, Italy and France

**Week 7:** Tapestries of Greece, Coptic, Europe, Peru

**Week 8:** Carpets and flooring of Middle and Far East

**Week 9 :** Shawls of India, England, France, Laces of Europe, Linen damasks of Ireland and Belgium

**Week 10:** Study of master pieces of world textiles part II: Applied Design, Resist dyed fabrics of India, Indonesia and Japan, Printed textiles of India, France and England

**Week 12:** Embroideries of China, Persia and England and Study of Art and Craft Movements - Influence of Art Movements on textile design and types- Art Deco, Art Nouveau, Bauhaus, Cubism, Futurism, Fauvism

#### **Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand key techniques in the textile history and apply these to the identification of textiles	Power point presentation and lecture and videos	Test, Assignment
2	Understand the beginnings of the textile industry in ancient civilizations.	Power point presentation and lectures	Quiz, Assignments
3	Study of master pieces of world textiles - Structural designs	Power point presentation and lecture, Visit to museum	Presentations, Test, Report of visit

4.	Study of master pieces of world textiles - Applied science	Power point presentation and lecture, Visit to museum	Report of visit, Presentations
5	Art and Craft Movements	Power point presentation and lecture	Test, Assignment

**WORLD TEXTILES: TECHNIQUES AND DESIGN  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To develop creative and technical skills for design and illustration

**Course Learning Outcomes:**

1. Understand the fundamentals of illustrations
2. Learn to conceptualize design and its implementation on illustrations
3. Acquire skills in illustrating patterns
4. To use computer skill as a tool to develop illustrations

**CONTENTS**

**PERIODS**

**UNIT I: Understanding Fashion Illustration**

**8**

- Study of fashion figure/ croquette
- Sketching of fashion figure/ croquette

**UNIT II: Art Movements**

**4**

- Study of art movements and their importance in fashion
- Renaissance, Baroque, Bauhaus, Art Nouveau, Art Deco, Pop Art

**UNIT III: Computer Applications**

**8**

- Introduction to Adobe Photoshop and its tools
- Fashioning Theme board based on Art Movements using adobe photoshop
- Creating Colour Palette using adobe photoshop
- Tracing of Fashion Croquette

**UNIT IV: Motif and Texture Development**

**8**

- Motif Development based on selected theme/ art movement
- Design motif repeats
- Creation of textures on adobe photoshop

**UNIT V: Designing Patterns**

**8**

- Creating repeat patterns and layouts

- Developing patterns with motifs and textures

#### **UNIT VI: Rendering**

**12**

- Rendering of patterns on fashion croquettes
- Rendering of patterns on home products

#### **Suggested Readings:**

- Kipper A (2011) *Fashion Illustration Inspiration and Technique*, A David and Charles book
- Gardener W (2009) *Art Through The Ages: A Global History*, Thomson Wardsworth, USA, 13<sup>th</sup> Edition
- Seivewright S (2007) *Research and Design*, AVA Publishing SA
- Roojen PV (2002) *Art Nouveau Designs*, The Pepin Press- Agile Rabbit Editions, Singapore
- <https://helpx.adobe.com/photoshop/tutorials.html>, Adobe Photoshop Tutorials
- <https://helpx.adobe.com/illustrator/tutorials.html>, Adobe Illustrator Tutorials

### **PSYCHOLOGY OF FASHION THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

#### **Course Objectives:**

The course aims to elaborate role of fashion and clothing in communication of cultural practices

which enables to understand the functions of a garment and to explore meaning of fashion and clothing for designer, wearer or onlooker.

#### **Course Learning Outcomes:**

1. Understanding ways in which fashion and clothing can be perceived
2. Listing various functions of a garment
3. Analyzing role of clothing as a sign

#### **CONTENTS**

#### **PERIODS**

#### **UNIT I: Fashion, Clothing, Communication and Culture**

**8**

- Definitions of fashion, style, clothing and dress
- Fashion art and design
- Fashion, clothing and communication
- Fashion, clothing and culture

#### **UNIT II: Fashion Theory**

**16**

- Functions of fashion and clothing
  - Material functions (Protection, modesty and concealment, immodesty and attraction)
  - Cultural functions (Communication, individualistic expression, social worth or status, definition of social role, economic worth or status, political symbol, religious and social ritual, recreation etc.)
- Recent investigations of fashion process

#### **UNIT III: Fashion, Clothing and Meaning**

**16**

- Meaning as external to garment/ensemble/image (the designer, wearer or spectator, authorities)
- Meaning as internal to garment/ensemble/image
- Semiological account of meaning (the sign, denotation and connotation, syntagm and paradigm)

**UNIT IV: Current Developments, Issues and Trends in Fashion and Clothing Behavior Researches** **8**

- Dress influencing impression of others
- Effect of dress on others' behavior
- Dress affecting our self- perception, self-esteem and behavior
- Appearance and social stratification

**Suggested Readings:**

- Barnard, M. (2008) (re-printed) *Fashion as Communication*, Routledge publication, Francis & Taylor group, ISBN978-0-415-26017-6.
- Kaiser, S. (1996) *The Social Psychology of Dress: Symbolic Appearances in Context*, Fairchild books, New York.
- Workman, J., and Freeburg, B. (2009) *Dress and Society*, Fairchild books, New York.

**Teaching Plan:**

**Week 1:** Definitions of fashion, style, clothing and dress, Fashion art and design

**Week 2:** Fashion, clothing and communication, Fashion, clothing and culture

**Week 3:** Functions of fashion and clothing: Material functions (Protection, modesty and concealment, immodesty and attraction)

**Week 4&5:** Functions of fashion and Clothing: Cultural functions (Communication, individualistic expression, social worth or status, definition of social role, economic worth or status, political symbol, religious and social ritual, recreation etc.)

**Week 6:** Recent investigations of fashion process

**Week 7:** Meaning as external to garment/ensemble/image (the designer, wearer or spectator, authorities)

**Week 8:** Meaning as internal to garment/ensemble/image

**Week 9&10:** Semiological account of meaning (the sign, denotation and connotation, syntagm and paradigm)

**Week 11:** Dress influencing impression of others, Affect of dress on others' behavior

**Week 12:** Dress affecting our self- perception, self-esteem and behavior, Appearance and social stratification

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understanding role of Fashion and Clothing as a mode of communication.	Lecture and class discussion	Assignment
2.	Exploring functions of Fashion and Clothing	Class discussions with projected pictures depicting variety of clothing styles	Assignment
3.	Exposure to recent developments in fashion process	Lecture and Class Discussion	Review of Recent papers related to the topic
4.	Understanding meaning of Fashion and Clothing	Lecture and presentations	Project
5.	Familiarization with the current issues, trends and clothing behavior Researches	Lecture and class discussion	Review of recent papers.

## PSYCHOLOGY OF FASHION PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To learn designing through computer software.

**Course Learning Outcomes:**

1. Understand the basics of CAD and software
2. Acquire skills in drawing garment components in CAD
3. Translate the designs (drawing up )and textures using computer software

**CONTENTS**

**PERIODS**

**UNIT I: Basics of Computer Aided Design**

**8**

- Introduction to Software
- Introduction about the Toolbox

**UNIT II: Drawing in CAD**

**24**

- Figure drawing –Female Croqui
- Garment Components-Collar, Sleeves, Skirts, Trousers, Dresses etc.

- Dressing up fashion figures
- Accessories

### **UNIT III: Design Effects/Textures**

**16**

- Applying various texture and effects
- Illusion effects – created by fashion details, elements of design, color, texture
- Development of Prints

#### **Suggested Readings:**

- Allen, A. and Seaman, J. (1996) *Fashion Drawing -The Basic Principles*, London, B. T. BatsfordLtd..
- Drudi, E. and Paci,T.(2001) *Figure drawing for fashion design*, Amsterdam, The Pepin Press
- Corel Draw Tutorials

## **WOMEN’S WEAR THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

#### **Course Objectives:**

It aims to gain an understanding and knowledge of the industry involved in women’s wear sector. Also, to trace the development of fashion industry (ready to wear and couture) through the 20<sup>th</sup> century. The course will help to develop skills in designing, pattern making and construction of advanced styles in garment making techniques for women’s wear and critical fit evaluation.

#### **Course Learning Outcomes:**

1. Understand the market involved in women’s wear
2. Comprehend the evolution of fashion industry and would be aware of different styles and special features of 20<sup>th</sup> century costumes
3. Understand the woman’s body with respect to design selection of fabrics, garments and accessories
4. Develop popular garment styles for upper and lower garments for women and critical eye for fit evaluation.
5. Independently design a line for women’s fashion wear

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Review of Contemporary Fashion**

**10**

- Women’s Costume in the 20<sup>th</sup> century
- Development of fashion industry
  - Couture
  - Ready to wear
- Fashion centers

**UNIT II: Women's Wear Market** **8**

- Market economics of women apparel
- Categories in Women's Wear
- Women body type and sizes
- Styles and Silhouettes of Garments for different age groups
- Selection and sourcing of fabrics and trims
- Fashion Accessories for Women
- National and International brands for Women Wear

**UNIT III: Drafting and Pattern Making** **12**

- Identifying and recording measurements for various garments
- Drafts for upper garments: Straight kurta, Kalidar kurta, A-line, Skirt top
- Drafts for lower garments: Salwar, Churidar, Trouser, Palazzos
- Torso foundation: Boxy, Semi-fitted and Fitted
- Styles of dresses without waistline: Princess-line, Empire-line and Tent foundation
- Stylizing various components of a garment- sleeves, collars, plackets, pockets, vents & slits, peplum, godets, gussets

**UNIT IV: Fit** **6**

- Evaluating Fit of a basic blocks and garments- bodice, skirt, torso block, semi fitted dress, A-line dress
- Evaluating fit of various components of a garment
- Correcting fit and Pattern alteration
- Completing the commercial paper pattern

**UNIT V: Designing for Women's Wear** **12**

- Designing a line- Sources of fashion inspiration, Fashion seasons, Study of fashion forecast- styles colours, textures, accessories
- Role of a designer, Role of a producer/ manufacturer, jobber and merchandiser
- Sourcing (market levels)
- Retailers
- Consumers

**Suggested Readings:**

- Abling, B. and Maggio K. (2008)*Integrating Draping, Drafting and Drawing*, ISBN: 9781563674860, Fairchild books.
- Aldrich, W. (2008)*Metric Pattern Cutting for Women's Wear*, ISBN 10: 1405175672 / ISBN 13: 9781405175678, Wiley Blackwell Publication.
- Brown, P. and Rice, J. (2014) *Ready to Wear Apparel Analysis*, Fourth Edition. Pearson Education, India

- Crawford. C.A. (2018), *The Art of Fashion Draping*, ISBN: 9781501330292, Fairchild books.
- DiMarco, S. (2010)*Draping Basics*, ISBN: 9781563677366, Fairchild books.
- Frings,G.S.(2007) *FASHION From concept to consumer 9th ed.*, ISBN—10:0131590332/ ISBN-13: 978-0131590335, Pearson education Inc.
- Liechty, E.G., Pottberg D.N., Rasband, J., (2016)*Fitting and Pattern Alteration: A multi-method approach to the art of style selection, fitting, and alteration*, 3<sup>rd</sup> Edition, ISBN-13: 978-1628929720 / ISBN-10: 1628929723, Fairchild Publication.
- Shoben, M.M. and Ward, J.P.(2000) *Pattern Cutting and Making Up Volume 2*, Revised Edition, LCFS Fashion Media
- Tate,S.L. and Edwards, M.S.(2003) *Inside Fashion design*, 5<sup>th</sup>ed.,ISBN—10:0130453688/ISBN-13: 978-0130453662, Pearson education Inc.

**Teaching Plan:**

**Week 1:**Review of contemporary fashion: Women’s Costume in the 20<sup>th</sup> century

**Week 2:**Development of fashion industry (Couture and Ready to wear)

**Week 3:** Fashion centers

**Week 4:** Women’s wear market: Market economics of women apparel, Categories in Women’s Wear, Women body type and sizes Styles and Silhouettes of Garments for different age groups,

**Week 5:** Selection and sourcing of fabrics and trims, Fashion Accessories for Women, National and International brands for Women Wear

**Week 6, 7 &8:** Drafting and Pattern making: Identifying and recording measurements for various garments. Drafts for upper garments: Straight Kurta, Kalidar Kurta, A-line, Skirt top, Drafts for lower garments: Salwar, Churidar, Trouser, Palazzos, Torso foundation: Boxy, Semi-fitted and Fitted, Styles of dresses without waistline: Princess-line, Empire-line and Tent foundation

**Week 9:**Stylizing various components of a garment- sleeves, collars, plackets, pockets, vents & slits, peplum, godets, gussets

**Week 10:** Fit:Evaluating Fit of a basic blocks and garments- bodice, skirt, torso block, semi fitted dress, A-line dress, Evaluating fit of various components of a garment Correcting fit and Pattern alteration, completing the commercial paper pattern

**Week 11:** Designing for women’s wear: Designing a line, Sources of fashion inspiration, Fashion seasons, Study of fashion forecast- styles colours, textures, accessories

**Week 12:** Role of a designer, Role of a producer/ manufacturer, jobber and merchandiser, sourcing (market levels), Retailers, Consumers.

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Students would be able to understand the evolution of fashion	Relevant online material available such as	PowerPoint presentation by

	industry and would be aware of different styles and special features of 20 <sup>th</sup> century costumes	Videos, movies etc, Discussion, presentation	students
2.	Student will be able to understand the market involved in women's wear	Discussion, presentation and visit to malls and market place	Project work
3.	Student will be able to understand the woman's body with respect to design selection of fabrics, garments and accessories	Lecture, discussion and presentation	Assignment
4.	Student will be able to develop popular garment styles in upper and lower garments for women	Discussion	Presentation
5.	Student will be able to develop a critical eye for fit evaluation of the above learnt garments	Discussion, presentation and demonstration	Assignment
6.	Student will be able to independently design a line for women's fashion wear	Discussion	Project work

### **WOMEN'S WEAR PRACTICAL**

**Marks: 50**

**Duration: 3Hrs.**

**Course Objectives:**

It will develop a keen eye for design and development of patterns for styles in women's fashion wear. It will also enable the student to successfully bring out a line collection as a part of the team theme

**Course Learning Outcomes:**

1. Think and develop a portfolio of dresses for women based on a selected theme.
2. Able to make patterns for the selected dresses out of the portfolio
3. Construct any two selected dresses in keeping with the theme
4. Show case their work as a class/ team effort

**CONTENTS**

**PERIODS**

**UNIT I: Designing for Women's Wear**

**12**

- Designing an upper and lower garment based on a theme
- Sketching of dresses based on a theme for a portfolio

**UNIT II: Pattern Making** **16**

- Developing patterns for two of the above selected designs

**UNIT III: Garment Construction** **20**

- Construction and presentation of two term garments comprising of upper/lower garment and a dress without a waistline for formal or casual wear

**Suggested Readings:**

- Abling, B., Maggio K. (2008)*Integrating Draping, Drafting and Drawing*, ISBN: 9781563674860, Fairchild books.
- Aldrich, W., (2008), *Metric Pattern Cutting for Women's Wear*, ISBN 10: 1405175672 / ISBN 13: 9781405175678, Wiley Blackwell Publication.
- Brown, P., Rice, J.(2014) *Ready to Wear Apparel Analysis*, Fourth Edition. Pearson Education, India
- Crawford. C.A., (2018)*The Art of Fashion Draping*, ISBN: 9781501330292, Fairchild books.
- DiMarco, S., (2010)*Draping Basics*, ISBN: 9781563677366, Fairchild books.
- Liechty, E.G., Pottberg D.N., Rasband, J., (2016)*Fitting and Pattern Alteration: A multi-method approach to the art of style selection, fitting, and alteration*, 3<sup>rd</sup> Edition, ISBN-13: 978-1628929720 / ISBN-10: 1628929723, Fairchild Publication.

Shoben, M.M., Ward, J.P. (2000) *Pattern Cutting and Making Up Volume 2*, Revised Edition, LCFS Fashion Media

**SUSTAINABILITY IN TEXTILE AND FASHION INDUSTRY  
THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objective:**

The course aims to introduce the concept of sustainability in various stages of textile and apparel production, understanding of the environmental issues in textile supply chain and familiarity with guidelines and regulations that support sustainable textile production practices

**Course Learning Outcomes:**

1. An understanding of the textile supply chain, associated sustainability issues and the effect of industrial revolution on current fashion scenario
2. Knowledge of social economic and environmental aspects of sustainability; various methods of sustainability analysis
3. An understanding of life cycle thinking, Circular economy, Corporate Social Responsibility, Sustainable design, Green supply chain,
4. Familiarity with regulations and standards promoting sustainability in textile supply chain, EMS, GRI, Eco-labeling, GOTS and various voluntary organizations and campaigns

**CONTENTS**

**PERIODS**

**UNIT I: Fashion Industry and Environmental Issues** **12**

- Types of textile fibers; the textile value chain and associated processes, environmental issues associated with various textiles: natural and manmade fibres

- Factors influencing environmental impacts in textile supply chain: energy (electricity and fossil fuels), water use, water pollution, chemicals, dyes, auxiliaries, waste, air, noise
- Industrial revolution: evolution of fashion through first, second, third and fourth industrial revolution; fast fashion, overconsumption, sweatshops

#### **UNIT II: Sustainability: Definition, its Various Aspects and Methods of Assessment 12**

- Definition of Sustainability, the triple bottom framework: social, economic, environmental perspectives of sustainability
- Terminology in sustainability: environmental sustainability: ecology and ecological balance, circles of sustainability
- Sustainability analysis: Life Cycle Assessment, Life Cycle Costing, Social LCA
- Carbon footprint
- Water footprint
- Higg Index

#### **UNIT III: Approaches to Achieve Sustainability in Business 12**

- Circular economy, R's of waste management: reduce, reuse, recycle, refuse, repurpose, recover, rethink
- Eco friendly textile processing and waste minimization
- Sustainable fibres: Regenerated fibres, fibers from waste material and bioengineered fibers
- Corporate Social Responsibility
- Workers and community safety: use of safe dyes and auxiliaries, safe chemical handling practices
- Sustainable design
- Role of supply chain management on sustainability in textile value chain: green supply chain

#### **UNIT IV: Regulations and Standards for Sustainable Practices 12**

- Environmental Management System: ISO 14000 Certification and standards
- Global Reporting Initiative
- Fair-trade, Organic standard
- Eco-labeling, Global Organic Textile Standard
- Voluntary organizations and campaigns: ZDHC, SAC, OEKOTEX, Detox Campaign, Revolution Blue Sign

#### **Suggested Readings:**

- Andrews, E.S. et al. (2009) *Guidelines for Social Life Cycle Assessment of Products*, Published by United Nations Environment Program
- Blackburn, R.S. (2005) *Biodegradable and Sustainable Fibres*: Woodhead Publishing Series in Textiles, ISBN-10: 185573916X, ISBN-13: 978-1855739161
- Blackburn, R.S. (2009) *Sustainable Textiles: Lifecycle and Environmental Impact*: Woodhead Publishing Series in Textiles, ISBN: 9781845694531.
- Fletcher, K (2012), *Fashion and Sustainability: Design for Change*: Laurence King Publishing, ISBN-10: 1856697541, ISBN- 13: 978-1856697545
- Jain, C. (2016) *Simplifying Corporate Sustainability – A guide to implementing Sustainable Practices in Textile Industry*: Createspace Independent Pub. ISBN 978-981-11-0386-5
- Gardetti, M.A., Torres, A.L. and Gardetti, M.A.(2013) *Sustainability in Fashion and Textiles*, Greenleaf Publishing Limited, ISBN 978-1-906093-78-5 (hbk)

- ISO - Central Secretariat, 2009. Environmental management: The ISO 14000 family of International Standards. Published by International Standards Organisation

**Teaching Plan:**

**Week 1:** Types of textile fibers; the textile value chain and associated processes, environmental issues associated with various textiles: natural and manmade fibres

**Week 2:** Factors influencing environmental impacts in textile supply chain : energy (electricity and fossil fuels), water use, water pollution, chemicals, dyes, auxiliaries, waste, air, noise

**Week 3:** Industrial revolution: Evolution of fashion through first, second, third and fourth industrial revolution; fast fashion, overconsumption, sweatshops

**Week 4:** Definition of Sustainability, The triple bottom framework: social, economic and environmental perspectives of sustainability, Terminology in sustainability: Environmental Sustainability: Ecology and Ecological Balance, Circles of sustainability

**Week 5:**Sustainability analysis: Life Cycle Assessment, Life Cycle Costing, Social LCA

**Week 6:**Carbon footprint, Water footprint, Higg Index

**Week 7:**Circular economy, R's of waste management: reduce, reuse, recycle, refuse, repurpose, recover, rethink; eco-friendly textile processing and waste minimization

**Week 8:**Corporate Social Responsibility; workers and community safety; use of safe dyes and auxiliaries, safe chemical handling practices

**Week 9:**Sustainable design; Role of supply chain management on sustainability in textile value chain: green supply chain

**Week 10:**Environmental Management System: ISO 14000 Certification and standards

**Week 11:**Global Reporting Initiative, Fair-trade, Organic standard, Eco-labeling, Global Organic Textile Standard

**Week 12:**Voluntary organizations and campaigns: ZDHC, SAC, OEKOTEX, Detox Campaign, Revolution Blue Sig

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	An understanding of the textile supply chain, associated sustainability issues and the effect of industrial revolution on current fashion scenario	Lecture mode, Presentation	Quiz/test
2.	Knowledge of social economic and environmental aspects of sustainability; various methods of sustainability analysis	Lecture mode, Presentation	Quiz/test
3.	An understanding of life cycle thinking, Circular economy, Corporate Social Responsibility,Sustainable design, Green supply chain,	Lecture mode, Presentation	Tasks will include projects, reports and presentation
4.	Familiarity with regulations and standards promoting sustainability in	Lecture mode and	Tasks will include projects, reports

	textile supply chain, EMS, GRI, Eco-labeling, GOTS and various voluntary organizations and campaigns	presentation	and presentation
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## SUSTAINABILITY IN TEXTILE AND FASHION INDUSTRY PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

### Course Objectives:

To enable an understanding of the concept of sustainability and life cycle assessment and analyzing various environmental indicators; such as: energy, carbon footprint and water footprint and to apply the concept of recycling and reusing material for textile/ apparel production.

### Course Learning Outcomes:

1. Ability to develop process flow charts and collect data
2. Analyze energy, water and carbon footprint of a textile process
3. Learning of dye effluent removal and testing of biodegradability of fibres
4. Familiarity with sustainable brands, sustainable textiles and their application in product development

### CONTENTS

### PERIODS

#### UNIT I: Life Cycle Assessment

**20**

- Concept of “Cradle to Grave”, developing a process flow chart, data collection
- Assessment of energy consumption of a textile product
- Assessment of carbon footprint of a textile product
- Assessment of water footprint of a textile product

#### UNIT II: Understanding and Enhancing Textile Sustainability

**8**

- Removal of dye effluent using natural material
- Extraction of fiber from agro waste residues

#### UNIT III: Case Studies

**4**

- Case studies of brands addressing sustainability in different ways

#### UNIT IV: Product Development from Sustainable Materials

**16**

- Product development using textile waste and thermoset resins
- Application of recycled/reused material in fashion

### Suggested Readings:

- Blackburn, R.S. (2005) *Biodegradable and Sustainable Fibres*: Woodhead Publishing Series in Textiles, ISBN-10: 185573916X, ISBN-13: 978-1855739161
- Blackburn, R.S. (2009) *Sustainable Textiles: Lifecycle and Environmental Impact*: Woodhead Publishing Series in Textiles, ISBN: 9781845694
- Gordon J. F. Hill C. (2014), *Sustainable Fashion: Past, Present and Future*, Bloomsberry Academic Publications, New York

- Muthu S. (2017), *Sustainable fibres and Textiles*, ISBN: 9780081020418, Woodhead Publishing

## MARKETING MANAGEMENT THEORY

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objective:**

To enable the students to understand the importance and scope of marketing in a dynamic environment as well as the consumer behaviour through market research and to gain insights into the 4P s of marketing.

### **Course Learning Outcomes:**

1. Understand the dynamics of market environment
2. Comprehend the concepts of consumer behavior, marketing research and sales forecasting
3. Knowledge regarding the process of new product development and Branding and Pricing strategies
4. Skill to deliver the customer value through integrated marketing communication strategy
5. Design customer driven marketing mix strategy

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Introduction to Marketing Management**

**4**

- Importance and scope of Marketing
- Company Orientation towards Market place
- Adapting to new economy

#### **UNIT II: Understanding Market Place and Consumers**

**10**

- Analysing marketing environment
- Market segmentation and targeting
- Marketing research and sales forecasting
- Consumer Behaviour Analysis
  - Factor Influencing consumer Behaviour
  - Type of buying decision behavior
  - Buying decision process

#### **UNIT III: Product Planning and Development**

**10**

- Product line, Product mix and Product classification
- New Product Development
- Product life cycle and strategies
- Product positioning and Differentiation strategies
- Branding Strategies

#### **UNIT IV: Pricing**

**8**

- New Product Pricing strategies
- Product mix pricing strategies
- Pricing adjustment strategies

- Price changes

### **UNIT V: Marketing Communication**

**8**

- Integrated marketing communication strategy
- Managing mass communications
- Development and managing advertising programs
- Sales promotion and public relations and personal selling
- Direct & online marketing: Building direct customer relationships

### **UNIT VI: Marketing Channels: Delivering Customer Value**

**8**

- Nature and importance of marketing channels
- Channel behavior and organization
- Channel Design Decisions
- Channel Management Decisions
- Marketing logistics and supply chain Management

#### **Suggested Readings:**

- Kotler, P., Keller, K.L., Koshy, A. and Jha, M. (2012). *Marketing Management 14<sup>th</sup>ed.*: Pearson education Inc., ISBN 98-81-317-6716-0.
- Robbins, P.S. and Dcenzo, A.D. (2005). *Fundamentals of management- essential concepts and Applications 5<sup>th</sup>ed.* : Pearson education Inc, Dorling kindersley (India) pvt. ltd., ISBN 81-317-0151-3
- Belch, E.G. and Belch, A.M. (2003). *Advertising and Promotion- An integrated marketing communications perspective 6<sup>th</sup> ed.*: Tata McGraw-Hill publishing company ltd., ISBN 13:978-0-07-058194-4, ISBN 10:0-07-058194-0
- Poloian, G.L.(2009). *Multichannel Retailing* : Fairchild Books-New York, ISBN 978-1-56367-630-7
- Robbins, P.S. and Coulter, M.(2008). *Management 9<sup>th</sup> ed.*: Prentice Hall India pvt. ltd., ISBN 81-203-3497-7
- L'Etang, J. (2008) *Public relations- Concepts, practice and critique*: Sage publications ltd., ISBN 978-1-4129-3047-5 ISBN 978-1-4129-3048-2 (pbk).

#### **Teaching Plan:**

**Week 1:** Introduction to marketing- Scope, importance, company orientation and adapting to new economy, Marketing Environment- Micro and macro factors

**Week 2:** Marketing research and Sales Forecasting

**Week 3:** Consumer behavior

**Week 4:** New product development and branding strategies

**Week 5:** Product life cycle and strategies

**Week 6:** Positioning and differentiation strategies

**Week 7:** Price setting strategies

**Week 8:** Price adjustments and change

**Week 9:** Integrated mass communication strategy mix

**Week 10:** Direct and online marketing

**Week 11:** Marketing channels- design and management

**Week 12:** Marketing logistics and supply chain management, Presentation by students

### Facilitating the Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understanding the importance and scope of marketing	Lecture mode and Group discussion	Presentation by students- relevant articles from Newspaper, magazine, online material etc.
2.	-Understanding the dynamics of market environment and to comprehend the concepts of marketing research and sales forecasting	Lecture mode and relevant video lectures by eminent marketers	Assignment
3.	Have knowledge regarding the process of new product development and Branding strategies	Lecture mode, video presentations and slide shows of various brands	Assignment /presentation related to product life cycle oriented marketing strategies of any apparel or textile brand in various phases of PLC
4.	Understanding price setting and price adjustment strategies	Lecture mode	Assessment will cover both theoretical and practical aspects of learning- Quiz, test etc.
5.	Understanding integrated marketing communication mix	Lecture mode for theoretical component & promotional videos of various brands; Group discussions to understand competitive strategies	Presentation on promotional strategy of any brand/ retail outlet / company/ group of companies by students
6.	Have knowledge of distribution logistics and supply chain Management	Classroom teaching, field visits and special lectures by professionals in the field to understand the importance of creating customer value.	Field visit report

## **MARKETING MANAGEMENT PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs**

### **Course Objectives:**

To give students the opportunity to analyse and evaluate the operation of the 4P s of marketing in the real marketplace and enable them to perform market segmentation, targeting and competitive positioning.

### **Course Learning Outcomes:**

1. Analyse the role of marketing within the firm and society.
2. Develop an understanding of the four basic variables in the marketing mix: product, price, promotion and distribution.
3. Skill to design an integrated marketing communication strategy
4. Exercise analytical, communication and presentation skills through the use of technological aids.

### **CONTENTS**

### **PERIODS**

<b>UNIT I:</b> Analysis of Demographics of Indian market	<b>8</b>
<b>UNIT II:</b> Lifestyle segmentation (VALS) in fashion industry	<b>4</b>
<b>UNIT III:</b> Idea generation for a New product	<b>4</b>
<b>UNIT IV:</b> Brand study	<b>8</b>
<ul style="list-style-type: none"><li>• Effect of brand image/store image on consumer preference,</li><li>• Impact of brand awareness on consumer/brand loyalty: A study of any branded apparel/fashion item</li><li>• Relation between brand extension, brand personality and consumer acceptance</li><li>• Identify factors influencing brand switching in any sector/merchandise category</li></ul>	
<b>UNIT V:</b> Comparative study of pricing strategies adopted by prominent apparel retail outlets	<b>4</b>
<b>UNIT VI:</b> Study of new retail formats and marketing channels	<b>4</b>
<b>UNIT VII:</b> Promotion	<b>8</b>
<ul style="list-style-type: none"><li>• Examine influence of promotion such as effect of advertising on consumer behavior, price sensitivity etc.</li><li>• Developing a communication strategy for a hypothetical brand promotion for both traditional and social media</li><li>• Design a Promotional calendar for a brand/event</li></ul>	
<b>UNIT VIII:</b> Case study of an apparel brand/ outlet: report and presentation	<b>8</b>

## **SEMESTER IV**

<b>SEMESTER IV</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 15 FASCC401: Dissertation/Experiential Learning Project		4		4
Total credits in core course	4			
<b>Number of elective courses</b>	<b>Credits in each Elective course</b>			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 3	4	2		6
Elective course 4	4	2		6
Elective course 5	4	2		6
Total credits in elective courses	18			
Total credits in Semester IV	22			

**Elective Courses: Select any three of the following:**

- FASEC401-Children's Wear
- FASEC402-Functional Clothing
- FASEC403- Textiles for Home and Hospitality
- FASEC404- Technical Textiles
- FASEC405- Textile Conservation
- FASEC406- Fashion Communication

## **DISSERTATION/ EXPERIENTIAL LEARNING PROJECT**

### **Course Objectives:**

To develop skills in conducting a research study/ working in a project and learn the process of writing a dissertation/ project report

### **Course Learning Outcomes:**

Student will be able to -

1. Know the practical aspects of, collecting data/ project work
2. Evaluate, select and use appropriate strategies for reduction, analysis and presentation of data collected during research process/ project work
3. Suitably illustrate data/ insights using various graphical and other methods.
4. Prepare a dissertation document/ project report based on research process/ project work done.

Students will be given an option of doing either

A) Dissertation or B) Project work in a chosen area congruent to their discipline/ field of study.

The work will be an original effort.

## **CHILDREN'S WEAR THEORY**

**Marks: 100**

**Duration: 3Hrs.**

### **Course Objectives:**

The course aims to prepare the student to take up a specialized learning about the types of children's wear in the industry and about designing successfully garments for children keeping in mind their special requirements.

### **Course Learning Outcomes:**

1. Learn about the children's garment industry
2. Learns specific requirements for children's wear designing
3. Prepare patterns and construct theme based children's garments
4. Prepare students to be able to work in garment industry

## **CONTENTS**

## **PERIODS**

### **UNIT I: Children's Garment Industry**

**12**

- Children's clothing industry
- Law's specifications world-wide
- Factors affecting selection of clothes for children- age, sex, body type, family financial status, geographical location and weather, parental occupation, family social status, child's socializing needs & occasion
- Age wise categorization for requirement for children's clothing,
- Garment categories -Inner wear, outer wear, outer-outer wear, baby layette,
- Sizing – boy's sizes, girls sizes
- Accessories

## **UNIT II: Design Requirements** **12**

- Designing for children of various age groups
- Selection of suitable fabrics and trimmings for various garments
  - Measurement charts for children
  - Developing a line for particular segment
  - Study of forecast for children's wear
- Design illustration for children's clothing ( flat sketch and 3-D)

## **UNIT III: Drafting and Pattern Making** **16**

- Terminology
- Drafting children's bodice block, sleeve block, collars, skirt, shorts and trousers
- Adapting basic patterns to various styles for tops and blouses, skirts, dresses for girls
- Adapting basic patterns to various styles for upper and lower garments for boys
- Developing layout plans for various fabric types

## **UNIT IV: Construction Sequences** **8**

- Steps in construction of the following garment components:-
- Collars
- Sleeve
- Pockets
- Belts
- Steps in completing the following garments:
  - Girls frocks (various styles)
  - Girls skirts
  - Girls tops
  - Boys shirts
  - Night suits
  - Trousers/ shorts
  - Jackets

### **Suggested Readings:**

- Aldrich, W. (2009) *Metric Pattern Cutting for Children's Wear and Babywear*, 4<sup>th</sup> Edition, Wiley Blackwell Publication.
- Brown, P., and Rice, J., (2014) *Ready to Wear Apparel Analysis*, Fourth Edition. Pearson Education India
- Crim, C.H. (2014) *Pattern Making for Kid's Clothes: All you need to know about Designing, Adapting, and Customizing Sewing Patterns for Children's Clothing*, Barnes & Nobles
- Donnanno, A. (2018) *Fashion Patternmaking Techniques for Children's Clothing*, Promo Press publication..
- Liechty, E.G., Pottberg D.N., and Rasband, J. (2016) *Fitting and Pattern Alteration: A multi-method approach to the art of style selection, fitting, and alteration*, 3<sup>rd</sup> Edition, ISBN-13: 978-1628929720 / ISBN-10: 1628929723, Fairchild Publication.
- Shoben, M.M., and Ward, J.P., (2000) *Pattern Cutting and Making Up Volume 2*, Revised Edition, LCFS Fashion Media

**Teaching Plan:**

**Week 1:** Study of children's clothing industry and rules and specifications, Factors affecting selection of clothes for children- age, sex, and body-type

**Week 2:** Factors affecting selection of clothes for children- family financial status, geographical location and weather, parental occupation, family social status, child's socializing needs & occasion

**Week 3:** Age wise categorization for requirement for children's clothing, Garment categories- Inner wear, outer wear, outer-outer wear, baby layette, sizing – boy's sizes, girl's sizes and Accessories

**Week 4:** Designing for children of various age groups. Selection of suitable fabrics and trimmings for various garments. Measurement charts for children

**Week 5:** Developing a line for particular segment. Study of forecast for children's wear; Design illustration for children's clothing (flat sketch and 3-D)

**Week 6:** Design illustration for children's clothing (flat sketch and 3-D)

**Week 7:** Drafting of basic blocks

**Week 8:** Adapting basic patterns to various styles for tops and blouses, skirts, dresses for girls

**Week 9:** Adapting basic patterns to various styles for upper and lower garments for boy.

**Week 10:** Developing layout plans for various fabric types

**Week 11:** Steps in construction of the following garment components- collars, sleeve, pockets, belts

**Week 12:** Steps in completing the following garments: girls frocks (various style), girls skirts, girls tops, boys shirts, night suits, trousers/ shorts, jackets

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Learn about the children's garment industry	Discussion, presentation and visit to the market	Assignment
2.	Learns specific requirements for children's wear designing	Lecture	Assignment
3.	Prepare patterns and construct theme based children's garments	Discussion and demonstration	Project work
4.	To prepare students to be able to work in garment industry	Discussion and group activity	Evaluation of a team task to be given

**CHILDREN'S WEAR  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

It aims to learn about styles suitable for children and to be able to have a comprehensive

knowledge about selection of fabrics and development of patterns for selected styles for children. Also to have a working knowledge of construction processes in garment assembly for children

**Course Learning Outcomes:**

- Assess the suitability of fabric to styles for children
- Make a flat sketch of styles for children's garments.
- Create patterns for the selected styles of garments
- Place patterns on fabric, cut and sew the garments from a selected range

**CONTENTS**

**PERIODS**

**UNIT I: Understanding Styles for Children Garments**

**12**

- Develop a fabric portfolio suitable for children's wear
- Design and create a portfolio with Flat and 3D sketching of children's garment (Theme based)

**UNIT II: Pattern Making for Children's Clothes**

**20**

- Develop drafts for children's bodice, sleeve and skirt block
- Collars for children
- Sleeve variations for children
- Other garment components
- Adapting basic patterns to various styles of garments

**UNIT III: Laying, Cutting and Sewing**

**16**

- Suggest and prepare a pattern layout for the above
- Construct three garments from the selected range.

**Suggested Readings:**

- Aldrich, W., (2009) *Metric Pattern Cutting for Children's Wear and Babywear*, 4<sup>th</sup> Edition, Wiley Blackwell Publication.
- Brown, P., Rice, J. (2014) *Ready to Wear Apparel Analysis*, Second Edition. Pearson Education India
- Crim, C.H. (2014) *Pattern Making for Kid's Clothes: All you need to know about Designing, Adapting, and Customizing Sewing Patterns for Children's Clothing*. Barnes & Nobles
- Donnanno, A. (2018), *Fashion Patternmaking Techniques for Children's Clothing*, Promo Press publication.
- Liechty, E.G., Pottberg D.N., and Rasband, J., (2016), *Fitting and Pattern Alteration: A multi-method approach to the art of style selection, fitting, and alteration*, 3<sup>rd</sup> Edition, ISBN-13: 978-1628929720 / ISBN-10: 1628929723, Fairchild Publication.
- Shoben, M.M., and Ward, J.P. (2000) *Pattern Cutting and Making Up Volume 2*, Revised Edition. LCFS Fashion Media

# FUNCTIONAL CLOTHING THEORY

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

The course aims to understand required features in clothes for specific end uses which impart knowledge about ways to incorporate desired features in a garment and to know special garment construction procedures for functional clothing.

**Course Learning Outcomes:**

1. Understand the importance of functional clothing that is user centric
2. Identify desired features in a garment for specific end use and design garment in accordance
3. List the required accessories and garment construction steps required in production of functional clothing

**CONTENTS**

**PERIODS**

**UNIT I: User Centered Design**

**4**

- Conducting research
- Defining problem
- Design strategies

**UNIT II: Providing Mobility in Clothing**

**12**

- Expansion of clothing during movement
- Increased mobility in clothing
- Fit and movement

**UNIT III: Protective Clothing**

**12**

- Clothing system for thermal protection
- Impact –protective clothing
- Protective clothing design for radiation hazard

**UNIT IV: Clothing to Enhance and Augment Body Functions**

**12**

- Clothing for sensory perception
- Clothing for high visibility
- Clothing for physical strength enhancement
- Clothing for protection from water
- Clothing for special need
- Smart textile

**UNIT V: Product Development and Garment Production**

**8**

- Heat sealing
- Thermal welding
- Moulding and heat shaping
- Fastening system

**Suggested Readings:**

- Hayes, S.G., and Venkatraman,P. (2017) *Material and Technology for Sportswear and Performance Apparel*, CRC Press.
- Song, G. (ed.) (2011) *Improving Comfort in Clothing*, Woodhead Publishing.
- Watkins, S.M., and Dune, L.E. (2015) *Functional Clothing Design, from Sportswear to Spacesuit*, Fairchild Books, New York.

**Teaching Plan:****Week 1:** User centered design**Week 2:** Providing mobility in clothing: Expansion of clothing during movement**Week 3:** Increased mobility in clothing**Week 4:** Fit and movement**Week 5:** Protective Clothing: Clothing system for thermal protection**Week 6:** Impact protective clothing**Week 7:** Protective clothing design for radiation hazard**Week 8:** Clothing to enhance and augment body functions: Clothing for sensory perception, Clothing for high visibility**Week 9:** Clothing for physical strength enhancement, Clothing for protection from water**Week 10:** Clothing for special need, Smart textile**Week 11:** Product development and garment production: Heat sealing, Thermal welding, Moulding and heat shaping**Week 12:** Fastening systems**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understanding Importance of user centric functional clothing	Lecture and case study	Review of recent product launches or papers involving functional clothing
2.	Learning about required features in the garment for enhanced mobility	Lecture and presentation	Identification of commercial products available and their analysis
3.	Exploring features to be incorporated in protective clothing	Lecture and case study	Assignment of recent innovations in this area
4.	Gathering information regarding clothing to enhance body functions	Lecture and presentation	Review of latest work done in this area.
5.	Learning garment production processes for functional clothing	Lecture and visit to fairs and manufacturing units	Project work

## FUNCTIONAL CLOTHING PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

To identify desired features to be incorporated in a garment for specific end use and learn special garment construction procedures used for functional clothing.

### **Course Learning Outcomes:**

1. Identify desired features in a garment for specific end use and design garment in accordance.
2. Construct prototype of functional clothing using appropriate garment construction procedures and accessories.

## **CONTENTS**

## **PERIODS**

**UNIT I:** Designing and developing patterns for garments with increased freedom of movement for a specific end use. **12**

**UNIT II:** Identifying desirable features for a temperature controlled garment and designing a suitable gear (Gear for fire fighters/suit for cold weather) **12**

**UNIT III:** Designing and developing patterns of clothing for people with special needs -For physical disability, specific medical condition, etc. **12**

**UNIT IV:** Construction of one of the above designed garment with appropriate method of garment construction and using best suited fasteners. **12**

### **Suggested Readings:**

- Hayes, S.G., and Venkatraman, P. (2017) *Material and Technology for Sportswear and Performance Apparel*, CRC Press.
- Song, G. (ed.) (2011) *Improving Comfort in Clothing*, Woodhead Publishing.
- Watkins, S.M., and Dune, L.E. (2015) *Functional Clothing Design, from Sportswear to Spacesuit*, Fairchild Books, New York.

## **TEXTILES FOR HOME AND HOSPITALITY THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

The aim is to acquire knowledge of history and use of textiles in home and hospitality sector and to gain knowledge regarding the selection criteria and care of various classes of textiles used in home and hospitality. It will also help to study the latest fashion trends and high performance materials in textiles used for home and hospitality.

### **Course Learning Outcomes:**

1. Recall the salient features of various period styles of furnishings.
2. Classify the textiles used for home & hospitality and describe their selection criteria.
3. Explain the role of emerging trends in fashion and technology used in textiles for home and

hospitality.

4. Discuss the growing market for home & hospitality and the major production centers in India.

## CONTENTS

## PERIODS

### **UNIT I: Introduction to Textiles Used in Home and Hospitality** **10**

- Textiles used in home and various sectors of hospitality like hospitals, modes of travelling (airlines, railways, automobiles etc.), restaurants and hotels
- Period styles in home furnishings
- Classification of textiles for home and hospitality (hard and soft): upholstery fabrics, window textiles, bed linen and other bed textiles, bathroom textiles, kitchen and table linen, floor coverings-rugs and carpets

### **UNIT II: Selection, Use, Care, Storage and Maintenance** **18**

- Various parameters for selecting textiles for home and hospitality (types, standard sizes, construction, performance, durability, aesthetics, price range etc.)
- Informative labelling and Packaging
- Government regulations and standards
- Maintenance of various product categories at domestic and commercial levels

### **UNIT III: Influence of Fashion and Technology** **10**

- Contemporary fashion trends in textiles for home and hospitality and forecast for the future
- Factors affecting selection of design (end use, size and type of room, type of arrangement, type of furniture, geographical location etc.)
- Designers, Brands and Outlets dealing with furnishings
- Innovations in technology, high performance materials and use of finishes to enhance functionality
- Sustainable and eco-friendly practices in textiles used for home and hospitality

### **UNIT IV: Manufacturing and Production Capacity of Textiles for Home and Hospitality** **10**

- Textiles for home and hospitality: Global Vs Indian market
- Growing domestic market and major production centers
- Present status of the industry and areas for improvement

#### **Suggested Readings:**

- Das, Subrata (2010) *Performance of Home Textiles*, New Delhi, Woodland Publishing India Pvt Ltd
- Howes, Karen (1997) *Making the Most of Bedrooms*, London, Conran Octopus
- Lebeau, Caroline (2004) *Fabrics- the Decorative Art of Textiles*, London, Thames and Hudson
- Neiswand, Nonie (1998) *Bedrooms and Bathrooms*, London, Conran Octopus
- Ranall, Charles T. (2002) *Encyclopedia of Window Fashions*, California, Randall International
- Wingate, Isabel B. (1949) *Textile Fabrics and Their Selection*, New York, Prentice Hall

**Teaching Plan:****Week 1:** Textiles used in home and various sectors of hospitality**Week 2:** Period styles in home furnishings**Week 3:** Classification of textiles for home and hospitality**Week 4:** Various parameters for selecting textiles for home and hospitality**Week 5:** Informative labelling and Packaging, Government regulations and standards**Week 6:** Maintenance of various product categories at domestic and commercial levels**Week 7:** Contemporary fashion trends, forecast, factors affecting selection of design**Week 8:** Designers, Brands and Outlets dealing with furnishings**Week 9:** Innovations in technology, sustainable and eco-friendly practices**Week 10:** Textiles for home and hospitality: Global Vs Indian market**Week 11:** Growing domestic market and major production centres**Week 12:** Present status of the industry and areas for improvement**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Recall the salient features of various period styles of furnishings.	Lecture/ PPT	Quiz for assessing the level of understanding
2	Classify the textiles used for home & hospitality and describe their selection criteria.	Lecture/ PPT / Group discussion	Class test
3	Explain the role of emerging trends in fashion and technology used in textiles for home and hospitality	Lecture / PPT / Group discussion	Assignment on review of latest developments from journals and magazines
4	Discuss the growing market for home & hospitality and the major production centres in India.	Lecture / Group discussion	Presentations by students on major production centres

**TEXTILES FOR HOME AND HOSPITALITY  
PRACTICAL**

**Marks: 50****Duration: 3 Hrs.****Course Objectives:**

It will help to acquire knowledge on selection parameters and different types of design details and fabrics used for interiors and to develop an understanding of the emerging trends in textiles used for interiors.

**Course Learning Outcomes:**

1. Analyze the range of textile products used for home & hospitality available in the market.
2. Apply the understanding of future forecast and advanced technology in designing interiors for different room types.

**CONTENTS****PERIODS****UNIT I: Selection of Textiles Used in Home and Hospitality** **20**

- Market survey of different categories of textiles used in home and hospitality (types, standard sizes, construction, performance, durability, aesthetics, price range etc.)
- Comparison of different brands (local / reputed) with respect to informative labelling and product packaging
- Compilation of swatches/ pictures of different fabrics used for interiors (woven, knit, non-woven, other methods of construction crochet, braiding, nets, laces etc.)

**UNIT II: Contemporary Trends in Textiles Used for Home and Hospitality** **28**

- Analysis of latest forecast trends
- Report on famous designers and key players (brands / outlets) dealing with furnishings
- Design exercises
- Planning fabric decorations for different room types based on end use, size and type of room, type of arrangement, type of furniture, geographical location etc.

**Suggested Readings:**

- Das, Subrata (2010) *Performance of Home Textiles*, New Delhi, Woodland Publishing India Pvt Ltd
- Howes, Karen (1997) *Making the Most of Bedrooms*, London, Conran Octopus
- Lebeau, Caroline (2004) *Fabrics- the Decorative Art of Textiles*, London, Thames and Hudson
- Neiswand, Nonie (1998) *Bedrooms and Bathrooms*, London, Conran Octopus
- Ranall, Charles T. (2002) *Encyclopedia of Window Fashions*, California, Randall International
- Wingate, Isabel B. (1949) *Textile Fabrics and Their Selection*, New York, Prentice Hall

**TECHNICAL TEXTILES****THEORY****Marks: 100****Duration: 3 Hrs.****Course Objectives:**

The course aims to understand the concept of technical textiles and its applications in various areas like construction, healthcare, transport etc. which develop skills in the critical selection and creative use of textile materials in various areas.

**Course Learning Outcomes:**

1. Understand the properties and performance of a range of technical textiles.
2. Analyze appropriate uses for a variety of fabrics, yarns and fibres in various areas like construction, healthcare, transport etc.
3. Generate and develop creative ideas for the use of technical textiles.

## CONTENTS

## PERIODS

### UNIT I: An Overview of Technical Textiles

8

- Definition and Scope
- Application areas
- Technical fiber, yarn and fabrics
- Textile reinforced composite materials

### UNIT II: Technical Textile Sectors, their Structures, Requirements and End Uses

32

- Industrial textiles
- Filtration textiles
- Geo textiles
- Medical and healthcare textiles
- Agricultural textiles
- Protective textiles
- Automotive textiles

### UNIT III: Other Applications and Future Trends

8

- Marine
- Industrial
- Military
- Energy Harvesting
- Sports

#### Suggested Readings:

- Anand, S.C., Kennedy, J F., Miraftab, M., and Rajendran, S. (2005) *Medical Textiles and Biomaterials for Healthcare*, Woodhead Publishing Series in Textiles.
- Bartels, V. (2011) *Handbook of Medical Textiles*, 1st Edition, Woodhead Publishing Series in Textiles.
- Bunsell, A. R. (2009) *Handbook of Tensile Properties of Textile and Technical Fibres*, 1st Edition, Woodhead Publishing Series in Textiles.
- Chapman, R. (2012) *Smart Textiles for Protection*, Woodhead Publishing Series in Textiles.
- Horrocks, R. and Anand, S. C. (2015) *Handbook of Technical Textiles*, second edition, volume 1: technical textile processes, The Textile Institute, Woodhead Publishing.
- Horrocks, R. and Anand, S. C. (2016) *Handbook of Technical Textiles*, second edition, volume 2: technical textile applications, The Textile Institute, Woodhead Publishing.
- Langenhove, L.V. (2007) *Smart Textiles for Medicine and Healthcare: Materials, Systems and Applications*, Woodhead Publishing Series in Textiles, 1st Edition.
- Tao, X. (2001) *Smart Fibres, Fabrics and Clothing: Fundamentals and Applications*, Woodhead Publishing Series in Textiles.

#### Teaching Plan:

**Week 1:** Definition and Scope, Application areas

**Week 2:** Technical Fiber, Yarn and Fabrics, Textile reinforced composite materials

**Week 3:** Industrial textiles

**Week 4:** Waterproof breathable fabrics,

- Week 5:** Filtration textiles,
- Week 6:** Geo textiles, Medical
- Week 7:** Healthcare textiles
- Week 8:** Agricultural textiles
- Week 9:** Protective textiles
- Week 10:** Automotive textiles
- Week 11:** Marine, Industrial, Military,
- Week 12:** Energy Harvesting, Sports, Future trends

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Basic understanding of technical textiles and its application	Presentation, group discussion	Review of recent product launches or papers involving technical textiles.
2.	Understanding of waterproof breathable fabrics, dust collection and fabric collection, use of nanofibers, yarn types and fabric constructions in filtration, functions of geotextiles, selection of fibers for geotextiles and their manufacturing, protection issues and developments in protective textile materials, fibers used for healthcare, protective textiles, textiles materials used in automotive and agriculture	Presentation, group discussion and team work	Tasks may include: projects, journals, reports and presentations, individually and/or in groups.
3.	Understanding of other application of technical textiles like in marine, military, sports and leisure	Lecture and presentation	Review of latest work done and future trends in this area.

**TECHNICAL TEXTILES  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To acquire knowledge about different type of industrial textiles available in market and develop an understanding of the principles involved in performance of technical textile fabrics.

**Course Learning Outcomes:**

1. Understand about the properties and performance of technical textiles.
2. Develop practical knowledge for the use of technical textiles.

## CONTENTS

## PERIODS

### UNIT I: Fabric Sourcing of Various Industrial Textile Fabrics; 8

- Coated fabric
- Foam fabric
- Fused
- Nonwoven
- Laminated
- Other fabrics used for geo-textiles, filtration, automotive, medical textiles, etc.

### UNIT II: Geometrical Parameters of Various Industrial Textile Fabrics; 24

- Fibre content
- Fabric weight
- Fabric Thickness
- Thread count
- Yarn count
- Yarn type
- Type of weave

### UNIT III: Field Visits 8

### UNIT IV: Project on any one area of technical textile 8

#### Suggested Readings:

- Booth, J. E (1968) *Principle of Textile Testing*, Chemical Publishing Corporation.
- Grover, E.B and Hamley, D.S (2011) *Handbook of Textile Testing and Quality Control* Wiley India Pvt Ltd
- Hearle, J.W.S. and Peters R.H. (1975) *The Physical Testing of Textile Fibres*, The Textile Institute, Heinmann.
- Saville. B.P. (1999) *Physical Testing of Textiles*, Woodhead Publishing Limited
- Skinkle, J. H (1949) *Textile Testing*, Chemical Publishing Co. Inc. Brooklyn, New York.

## TEXTILE CONSERVATION

### THEORY

**Marks: 100**

**Duration: 3 Hrs.**

#### Course Objectives:

The course aims to provide theoretical knowledge and a range of practical experience which enables to contribute to the understanding and preservation of culturally significant textile artefacts.

#### Course Learning Outcomes:

1. Understand the importance of textile collection management
2. Recognize agents of deterioration of textiles on analysis
3. Analyze and suggest correct collection maintenance practices and undertake curative conservation

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I: Introduction to Textile Collection Management</b>	<b>8</b>
<ul style="list-style-type: none"> <li>• Textiles – Definition, description and purpose</li> <li>• Terminology</li> <li>• Museums and Collections</li> <li>• Ethics in Conservation</li> </ul>	
<b>UNIT II: Nature of Materials and Agents of Deterioration</b>	<b>16</b>
<ul style="list-style-type: none"> <li>• Nature of Material and techniques</li> <li>• Agents of Deterioration – Natural and Man-made</li> <li>• Preventive Conservation and Curative Conservation</li> </ul>	
<b>UNIT III: Collection Maintenance</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Workspace and Equipment and safety</li> <li>• Materials and supplies</li> <li>• Basic Handling</li> <li>• Cleaning</li> <li>• Dealing special problems</li> </ul>	
<b>UNIT IV: Storage and Display</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• General requirements for storage</li> <li>• Storage systems</li> <li>• Methods and materials</li> <li>• General requirements for display</li> <li>• Exhibition planning</li> <li>• Mounting methods</li> <li>• Documentation</li> <li>• Risk management</li> </ul>	

**Suggested Readings:**

- King, Rosalie Rasso (1985) *Textile Identification- Conservation and Preservation*, New Jersey, Noyes Publications
- Landi, Sheila (1985) *The Textile Conservator's Manual*, London, Butterworths and Co.
- Mc Lean Catherine C. and Cannel, Patricia, (Eds) (1986) *Textile Conservation*, The Conservation Center, Los Angeles County Museum of Art
- Schweppe Helmut (1987) *Practical Information for Identification of Early Synthetic Dyes*, Washington DC, Conservation Analytical Laboratory, Smithsonian Institute
- *Science for conservators, Crafts Council Conservation Teaching Series, ---An Introduction to materials*, 1983- Cleaning, 1984- Adhesives and coatings

**Teaching Plan:**

**Week 1:** Importance of collection management, Terminology

**Week 2:** Museums, collections and Ethics

**Week 3:** Nature of Materials - Fibers and properties

**Week 4:** Fabric construction, finishes and dyes

**Week 5:** Agents of Deterioration – Natural and Man-made, damages

**Week 6:** Preventive and Curative conservation, Materials and Restoration

**Week 7:**Collection Maintenance - Materials, Handling, Transportation and Safety measures

**Week 8:**Cleaning - Mechanical, Wet

**Week 9:** Special Problems

**Week 10:** Storage - Requirements, Systems and methods and materials

**Week11:** Display- Requirements, Exhibition planning, Methods

**Week 12:** Documentation and Risk Management

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the importance of textile collection management	Unit transaction through lectures, audio-visual presentations, videos and museum visit	Quizzes, assignments, Visit to museum and report
2.	Recognize agents of deterioration of textiles on analysis	Unit transaction through audio-visual presentations, videos	Quizzes, assignments, Analysis of condition of textile collection
3.	Analyze and suggest correct collection maintenance practices	Unit transaction through projected visual explanations, textile samples	Assignments, Open book tests, Quizzes, visits

**TEXTILE CONSERVATION  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To examine and analyze museum environment and textile collections for damages and provide solutions for restoration and cleaning of heritage textiles.

**Course Learning Outcomes:**

1. Examine museum environment
2. Analyze and document textile collection damages and provide preventive conservation solutions
3. Undertake restoration and cleaning activities for textile artefacts
4. Plan textile collection storage and exhibitions

## CONTENTS

## PERIODS

### UNIT I: Museum Study and Environmental Factors 6

- Museum visit
- Survey of external and internal environmental factors of any selected museum
- Analysis of environmental conditions in work area

### UNIT II: Examination, Analysis and Documentation 6

- Examination of textiles- fibers, weave, type of textile based on technique of manufacture
- Analysis of documentation procedures of collection in college, sample documentation

### UNIT III: Cleaning and Restoration 6

- Cleaning methods- mechanical and solvent
- Restoration methods for stabilization of objects- darning, patching, lining samples

### UNIT IV: Scientific Analysis 6

- Ageing Simulations
- Thin Layer Chromatography

### UNIT V: Storage and Display Techniques 24

- Hands on- flat, rolled and framed storage for textiles
- Hands on- box and hanging storage for costumes
- Special techniques for special items
- Textile and Costume display techniques
- Exhibition planning

#### Suggested Readings:

- King, Rosalie Rasso (1985) *Textile Identification- Conservation and Preservation*, New Jersey, Noyes Publications
- Landi, Sheila (1985) *The Textile Conservator's Manual*, London, Butterworths and Co.
- Mc Lean Catherine C. and Cannel, Patricia, (Ed.) (1986) *Textile Conservation*, The Conservation Center, Los Angeles County Museum of Art
- Mary M. Brooks, Dinah Eastop (2011), *Changing Views of Textile Conservation*, Getty Publications, Los Angeles
- Scheweppe Helmut (1987) *Practical Information for Identification of Early Synthetic Dyes*, Washington DC, Conservation Analytical Laboratory, Smithsonian Institute
- *Science for conservators, Crafts Council Conservation Teaching Series,---An Introduction to materials*, 1983- Cleaning, 1984- Adhesives and coatings
- Mary M. Brooks, Dinah Eastop Getty Publications, 2011

## FASHION COMMUNICATION THEORY

**Marks: 100**

**Duration: 3 Hrs.**

#### Course Objectives:

The course aims at giving an overview of the fundamentals of global fashion and to equip students with the knowledge and understanding of the components of communication design.

**Course Learning Outcomes:**

1. Understand fundamentals of global fashion
2. Comprehend basics of graphic design
3. Learn elements of fashion photography, styling and visual merchandising
4. Examine and analyze use of varied media for communication and promotion

**CONTENTS****PERIODS****UNIT I: Fashion Basics****4**

- Fashion seasons, cycles
- Fashion forecasting
- Fashion brands and identity
- Fashion cultures
- International and national fashion designers, their philosophies and design

**UNIT II: Graphic Design****8**

- Design process and orientation
- Letter forms
- Anatomy of Type
- Logo design
- Basics of Grids and layouts

**UNIT III: Photography****10**

- Introduction to the arts and aesthetics of photography
- Introduction to Fashion Photography
- Handling camera (types and parts), exposure and focus modes
  - The exposure triangle
  - Depth of Field
- Lighting Basics- Axis of light, White Balance, Lighting Ratio and Incident Vs Studio Light
- Working with natural and artificial light
- Basic understanding of editing photographs
  - Retouching on Photoshop
  - Color Grading, selective color, selection tools, filters

**UNIT IV: Styling****4**

- Study of body shapes and proportion
- Color Analysis
- Personality: Personal style and expression
- Personal and Commercial styling

**UNIT V: Visual merchandising****10**

- Definition and purpose
- Line, Composition, Color and Balance
- Elements of Design
- Light and lighting
- Types of display and display settings

- Display and Light Fixtures
- Retail store exteriors and interiors

## **UNIT VI: Fashion and Media**

**12**

- Communication design for brands/producer and consumer
- Historical and contemporary perspective
- Fashion Journalism
- Fashion, beauty and luxury publishing
- Fashion advertising and PR
- Ethics in journalism

### **Suggested Readings:**

- Pegler, M. Martin (2006) *Visual Merchandising*, Fairchild Publications Inc., New York
- Greenwood, G. L. (2012) *Fashion Marketing Communications*, John Wiley and Sons
- Jay, Phyllida (2015) *Fashion India*, Thames and Hudson, London.
- Posner, Harriet (2011) *Marketing Fashion*, Lawrence King Publishing, China
- Jade, L.(2012) *Fashion Photography 101, A Complete Course for the New Fashion Photographers*, Hachette UK

### **Teaching Plan:**

**Week 1:** Fundamentals of fashion, theories, seasons, Fashion forecasting, cultures, subcultures, National and international fashion designers

**Week 2:** Design process and orientation: basic techniques for design development through a process of observation, study, exploration, ideation, and perception, Letter forms

**Week 3:** Typography & logo design, Anatomy of Type, Basics of grids and layouts

**Week 4:** Introduction to the arts and aesthetics of photography, Introduction to Fashion Photography, Handling camera, exposure and focus modes

**Week 5:** The exposure triangle, Depth of Field, Lighting Basics- Axis of light, White Balance, Lighting Ratio and Incident Vs Studio Light, Working with natural and artificial light

**Week 6:** Basic understanding of editing photographs, Retouching on Photoshop/ Lightroom, Color Grading, selective color, selection tools, filters

**Week 7:** Understanding of various kinds of figure types, proportions, Understanding of various kinds of face shapes, Color analysis on the basis of skin, hair and eye color and color suggestions, Identification of various kinds of personal styles and characteristics

**Week 8:** Definition and purpose of Visual Merchandising, Line, composition, Color and balance, Elements of Design, Light and lighting

**Week 9:** Types of display and display settings, Display and Light Fixtures, Retail store exteriors and interiors

**Week 10:** Understanding of communication design and process, Historical and contemporary perspective

**Week 11:** Fashion Journalism, Fashion, beauty and luxury publishing

**Week 12:** Fashion advertising and PR, Ethics in journalism

### Facilitating the Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Students will be able to develop an understanding of the fundamentals of fashion and lifestyle	Power point presentation and lecture  Workshop by designers	Quiz  Group discussion assessment
2.	The unit aims to develop visual and design vocabulary in students	Power point presentation and lecture  Group discussion	Assignment
3	It aims to develop visual skills through photography to communicate fashion.	Visits to galleries, museums, and the studios of successful working photographers.  Photo review with expert mentors	Documentation of the visit
4	It will enable students to understand styling (personal and commercial) depending on various body shapes and personality	Power point presentation and lecture	Quiz  Assignment
5	Students will be able to develop a good understanding of the key Visual Merchandising principles  And will be able to use color, lighting and graphics in displays	Guest lecture  Power point presentation  Visit to retail store	Document report
6	Students will develop observation and understanding of the basics of the electronic, print and social media. It aims to develop writing skills and visual skills to communicate fashion.	Demonstrations  Guest lecture  Visit to fashion media	Documentation  Assignment  Quiz

**FASHION COMMUNICATION  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

The course aims to familiarize students with current trends of the fashion and lifestyle business and equip them to plan and develop media solutions for a brand/retail set up

**Course Learning Outcomes:**

1. Comprehend trend analysis of apparel and accessories
2. Design graphics in terms of typography and logo, for a retail set up
3. Style as per the body and face shape and its photographic presentation
4. Create floor lay out plans and window display for a retail set up
5. Develop media report for print, electronic and digital media

**CONTENTS**

**PERIODS**

**UNIT 1: Fashion Basics**

**4**

- Study and documentation of trend analysis of international designers focusing on signature style, sources of inspiration and design language

**UNIT II: Graphic Design**

**8**

- Create various kinds of typecases
- Develop type cases, different grids and layout
- Logo design

**UNIT III: Photography and Styling**

**12**

- Study of editorial photography and its analysis
- Basic exercises on handling of camera and under different lights
- Determine various kinds of body shapes and face shapes and give suitable suggestions in terms of clothing, accessories for styling.
- Color analysis
- Style a model inspired by any subculture/ personal style and take different kinds of imagery (portfolio photography)

**UNIT IV: Visual Merchandising**

**8**

- Development of various kinds of retail floor layout
- Development of Window Display

**UNIT V: Fashion and Media**

**16**

- Identify and develop media solutions for a fashion brand, focusing on logo design and advertisement for a retail set up
- Fashion reporting for print media: magazines/newspaper
- Fashion reporting for electronic media
- Fashion reporting for digital and social media

**Suggested Readings:**

- Greenwood, G. L.(2012) *Fashion Marketing Communications*, John Wiley and Sons
- Jade, L.(2012) *Fashion Photography 101, A Complete Course for the New Fashion Photographers*, Hachette UK
- Jay, Phyllida (2015) *Fashion India*, Thames and Hudson, London.
- Pegler, M. Martin (2006) *Visual Merchandising*, Fairchild Publications Inc., New York
- Posner, Harriet (2011) *Marketing Fashion*, Lawrence King Publishing, China

**M.Sc. Development Communication & Extension**

**Department of Home Science**

**Lady Irwin College**

**University of Delhi**

**Course Credit Structure-CBCS**

**2018**

**Vision:**

Develop understanding and skills in culturally appropriate behavior change communication and extension strategies for promoting gender equity, social inclusion and sustainable development.

**Mission:**

The Department of Development Communication and Extension strives to train a cadre of professionals to work as development practitioners and researchers. The Department curriculum provides strong theoretical foundations and experiential learning to meet the existing market demands for trained professionals in participatory development processes and communication.

**Programme Objectives:**

- To sensitize the students to the needs of the family and community for mobilization and participation of masses, gender equity, women's empowerment and sustainable development through its interdisciplinary training and multi-faceted programme.
- To develop skills in monitoring & evaluation, training and capacity building of different stakeholder groups involved in development.
- To harness skills in message design, building media relations, social marketing and cause related advertising.
- To apprise the students of the process and potential of Behaviour Change Communication as a strategic intervention in Communication for Development (C4D).

**Program Outcomes:**

The Department of Development Communication and Extension endeavors to prepare social and behavior change communication professionals and researchers who would provide leadership for tackling complex problems and creating sustainable communities for tomorrow.

- Students are trained in planning, implementation, monitoring and evaluation of development programmes and projects.
- Students are sensitized to elements of community organization and their mobilization for development goals.

- Students develop skills in training and capacity building of different stakeholder groups involved in development.
- Students are enabled to critique, propose and formulate Behaviour Change Communication strategies.
- Policy and media advocacy skills help students to gain a professional edge.
- Students are trained as professional in the field of media message designing and development.
- Students develop skills in building media relations, social marketing and cause related advertising.
- Students are orientated to the impact of emerging communication technologies and skills in leveraging them for facilitating change in communities.

## COURSE CREDIT SCHEME

<u>Semester</u>	<u>Core Courses</u>		<u>Elective Course</u>				<u>Open Elective Course</u>			<u>Total Credits</u>
	No. of papers	Credits (L+T/P)	Total Credits	No. of papers	Credits (L+T/P)	Total Credits	No. of papers	Credits (L+T/P)	Total Credits	
I	4	16L+6T/P	22							22
II	5	12L+12T/P	24				1	2	2	26
III	5	8L+ 8P	16	2	8L+ 4P	12				28
IV	1	4	4	3	12L+6P	18				22
			66			30			2	98

**SEMESTER I**

Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 1 DCECC101: Research Methods	4		1	5
Core course 2 DCECC102: Communication, Culture & Society	4	2		6
Core course 3 DCECC103: Community Organization and Social Change	4	2		6
Core course 4 DCECC104: Social Policy and Development	4		1	5
Total credits in core course	22			
<b>Total credits in Semester I</b>	<b>22</b>			

<b>SEMESTER II</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 5 DCECC201: Statistics and Computer Applications	4	2		6
Core course 6 DCECC202: Theories of Human Behavior	4	2		6
Core course 7 DCECC203: Organizational Management and Training	4			4
Core course 8 DCECC204: Gender and Development	4			4
Core course 9 Integrated Practical DCECC205:  Dialoguing Change I  <b>A. Training and Capacity Building</b> <b>B. Radio for Development</b>		4		4
Total credits in core course	24			
Number of Open Electives	Credits in each open elective			
	Theory			Credits
Open Elective : DCEOE201: Organization Communication: Processes and Techniques	2			2
Total credits in open elective	2			
<b>Total credits in Semester II 26</b>				

<b>SEMESTER III</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 10 DCECC301: Policy and Advocacy for Health and Environment	4			4
Core course 11 DCECC302: Extension Systems and Programme Evaluation	4			4
Core course 12 Integrated Practical DCECC303: Dialoguing Change II A. Programme Development & Evaluation B. Video for Development		4		4
Core course 13 DCECC304: Internship		2		2
Core course 14 DCECC305: Technical Writing & Seminar		2		2
Total credits in core course	16			
Number of elective courses	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 1	4	2		6
Elective course 2	4	2		6
Total credits in elective courses	12			
<b>Total credits in Semester III      28</b>				

**Elective Courses for Semester III: Select any two of the following:**

- DCEEC301: ICTD & Community Media
- DCEEC302: Advertising, Social Marketing and Media Advocacy
- DCEEC303: Development Journalism

<b>SEMESTER IV</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 15 DCECC401: Dissertation/Experiential Learning Project		4		4
Total credits in core course	4			
Number of elective courses	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 3	4	2		6
Elective course 4	4	2		6
Elective course 5	4	2		6
Total credits in elective courses	18			
<b>Total credits in Semester IV</b>	<b>22</b>			

**Elective Courses: Select any three of the following:**

- DCEEC401: SBCC I – Health and Well Being
- DCEEC402: SBCC II – Sustainable Development and Climate change
- DCEEC403: SBCC III – Consumption and Public Policy
- DCEEC404: SBCC IV – Peace and Human Rights
- DCEEC405: Evaluation of Development Programmes & Policies
- DCEEC406: Corporate Social Responsibility and Fundraising
- DCEEC407: Urban Governance and Civil Society
- DCEEC408: Lifelong Learning, Lifeskills and Development
- DCEEC409: Knowledge Management & Digital Marketing
- DCEEC410: Corporate Communication and Public Relations
- DCEEC411: Livelihood Systems & Social Entrepreneurship

# **SEMESTER I**

**SEMESTER I**

Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 1 DCECC101: Research Methods	4		1	5
Core course 2 DCECC102: Communication, Culture & Society	4	2		6
Core course 3 DCECC103: Community Organization and Social Change	4	2		6
Core course 4 DCECC104: Social Policy and Development	4		1	5
Total credits in core course	22			
<b>Total credits in Semester I</b>		<b>22</b>		

# **RESEARCH METHODS THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course objectives:**

To provide students understandings about the basic concepts, approaches and methods in conducting research thereby enabling them to appreciate and critique the nuances of designing a research study as well the ethical dimensions of conducting researches.

**Course Learning Outcomes:**

Student will be able to -

1. Demonstrate knowledge of the scientific method, purpose and approaches to research
2. Compare and contrast quantitative and qualitative research
3. Explain research design and the research cycle
4. Prepare key elements of a research proposal
5. Explain ethical principles, issues and procedures

## **CONTENTS**

## **PERIODS**

### **UNIT I: Purpose of research**

**10**

- Definition, objectives and significance of research
- Types of research
- Scientific method: induction and deduction
- Research approaches: quantitative, qualitative and mixed
- Issues of relevance and cultural appropriateness

### **UNIT II: Principles of Research in quantitative and qualitative approaches**

**30**

*Research design*

- Meaning and need of research design
- Components and types of research design
- Issues in design construction

*Sampling, methods*

- Concept of sampling, key differences in the two approaches
- Sampling methods, sample size and sampling error
- Selecting participants and contexts to examine social phenomenon

*Data collection and analyses*

- Methods and measurement: Measurement in research, scales and errors in measurement , reliability and validity of measurement tools
- Methods of data collection and types of data
- Immersion, deep engagement, triangulation and reflexivity in qualitative data collection
- Data management and quality control
- Transcription in qualitative data analyses
- Errors in inference – Bias and confounding, reliability and validity issues

- Ensuring reliability and validity in qualitative research

### **UNIT III : The Research Cycle**

**12**

- Systematic literature review and referencing
- Formulating a research problem –Developing research questions and objectives, exploring research context/phenomenon
- Identifying variables, constructing hypotheses
- Deciding research approach and design
- Selection of sample/participants, choice of methods and analysis.
- Writing a research report-Styles and format.

### **UNIT IV: Values, Social Responsibility and Ethics in Research**

**8**

- Ethical principles guiding research: from inception to completion and publication of research
- Ethical issues relating to research participants and the researcher
  - Rights, dignity, privacy and safety of participants
  - Informed consent, confidentiality anonymity of respondents, voluntary participation, harm avoidance
  - Conflicts of interest or bias, Use of inappropriate research methodology, Incorrect reporting, misuse of information

#### **Teaching Plan:**

- **Week 1:** Definition, objectives and significance of research
- **Week 2 :**Types of research, Scientific method: induction and deduction
- **Week 3 :** Research approaches: quantitative, qualitative and mixed. Issues of relevance and cultural appropriateness
- **Week 4:** Meaning and need of research design; types of research design, issues in design construction
- **Week 5:** Concept of sampling, key differences in the two approaches, Selecting participants and contexts to examine social phenomenon
- **Week 6:** Sampling methods, Sample size and sampling error
- **Week 7:** Measurement in research, scales and errors in measurement , reliability and validity of measurement tools
- **Week 8:** Methods of data collection and types of data ,Immersion, deep engagement, triangulation and reflexivity in qualitative data collection
- **Week 9:** Data management and quality control; Transcription in qualitative data analyses
- **Week 10:** Errors in inference – Bias and confounding, reliability and validity issues; Ensuring reliability and validity in qualitative research
- **Week 11:**Research Cycle and writing research report
- **Week 12:** Ethics in Research

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Demonstrate knowledge of the scientific method, purpose and approaches to research.	Unit transaction through power point presentations,	Assignments, Open book test
2.	Compare and contrast quantitative and qualitative research	Unit transaction through power point presentations and classroom discussion about review and critique of journal articles	Quizzes and objective test
3.	Explain research design and the research cycle	Unit transaction through power point presentations and classroom discussion using research case studies	Assignments, Open book test
4.	Prepare key elements of a research proposal	Unit transaction through power point presentations Students to develop a live research project in groups	Assignments, Open book test Assessment of live project
5	Explain ethical principles, issues and procedures	Unit transaction through power point presentations and classroom discussion about research proposals	Class assignments and quizzes

**Suggested Readings:**

- Aschengrau A, Seage III GR. (2014) *Essentials of Epidemiology in Public Health*. (Third Edition). Sudbury, MA: Jones & Bartlett.
- Bell, J. (1999). *Doing your research project: Guide for first time researchers in social sciences*. New Delhi: Viva Books.
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, CA.: Sage.
- Blaxter, L. Hughes, C., & Tight, K. (1999). *How to research*. New Delhi: Viva Books.
- Bryman, A. (2008). *Social research method*. Oxford: Oxford University Press.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Denscombe, M. (1999). *The good research guide for small-scale social research projects*. New Delhi: Viva Publications.
- Denzin, N. and Lincoln, Y. (Eds.) 2005. *The Sage handbook of qualitative research*. London: Sage.
- Kerlinger, F. N, & Lee, H. B. (2000). *Foundations of behavioral research*. Belmont, Calif.: Wadsworth.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier
- Miles, M. & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. London: Sage.
- Rothman K. (2002) *Epidemiology – An Introduction*. New York. NY: Oxford University Press.

**COMMUNICATION, CULTURE AND SOCIETY  
THEORY****Marks : 100****Duration: 3 Hrs.****Course Objectives:**

To review central issues in the study of media and culture through an examination of the social identity (caste, class, gender, religion, ethnicity, sexuality, nationality) which acts in ideologically shaping the portrayals of the social order.

**Course Learning Outcomes:**

Student will be able to -

1. Critically analyze and explain why culture and society are central to media analysis.
2. Provides an introduction to the study of media to better understand how media impact culture and society.
3. Explore how people interpret and interact with media content, and how media influence cultural practices and continue to influence our daily lives.
4. Understand the research specific to media studies.

## CONTENTS

## PERIODS

### UNIT I: Communication, Culture and Identity

12

- Culture, Cultural Identities and Communication
- Structuralism and Communication - Ferdinand de Saussure
- Media Literacy – Scope and issues
- Media power and Surveillance - Roland Barthes and Louis Althusser
- Media Subversion and Culture Jamming
- Semiotics : Concept and Ideology
- Discourse, representation and the media
- Decoding media content– Stuart Hall

### UNIT II: Theorizing Media and Society

12

- Marshall McLuhan's Theory
- Marxism Ideology and the Media
- Analytical Theory-Spiral of silence
- Information theories-Diffusion Theory
- Normative Theories- Authoritarian, Libertarian, Social Responsibility, Developmental and Democratic participant
- Dependency Theory, Cultural Imperialism, Cultivation Theory
- Theories of direct and indirect influences- Magic Bullet theory
- Limited Effects Theories- Two-step flow theory

### UNIT III: Media and Ideology

12

- Ideology and Hegemony - Jurgen Habermas and The Public Sphere
- Media ideology and societal norms
- Ideology and Representation of Class, Race, gender, ethnicity, religion
- Propaganda Model - Noam Chomsky's and media filters

### UNIT IV: Media Effects

12

- Media Effects – Concept and Evolution of Models - Media Framing, Agenda Setting, Priming
- Media, Visuals and Narratives- Concepts of exposure, perception and retention
- Communication Research, Media Effects and exposure - Violence, Gender, Youths, Children
- Media policy and society – Issues of Political Economy, Copyright, Net Neutrality Debate, Hypercommercialism and Branded Society

### Suggested Readings:

- Barker, L. L. (1990) *Communication*. Eaglewood Cliffs, New Jersey: Prentice Hall.
- Croteau, D & William, H. (2014). *Media/Society: Industries, Images, and Audiences*. Thousand Oaks : Sage Publications.
- Fiske, J (1990). *Introduction to communication studies*. New York: Routledge.
- Hall, S., Evans, J & Nixon S. (Eds) (2013) *Representation: Cultural Representations and*

*Signifying Practices (Culture, Media and Identities series)* London : Sage Publications.

- Hendry, S & Stevenson, E . (2017). *AQA Media Studies for A Level Year 1 & AS: Student Book*. England: Illuminate Publishing.
- Kohli, V . (2017). *The Indian Media Business* (4 Ed). New Delhi : Sage Publications.
- MacBride et al (1980). *Many voices, one world*. Ibadan: University Press
- McQuail, D. (1975). *Communication*. London: Longman.
- Severin, V. G; Tankard, J. W. (1988). *Communication theory: origin methods and uses*.
- Turrow, J. (2000). (2nd Ed.). *Media systems in society*. New York: Longman Publications.
- Zeuchner, R. (1997) *Communicating Today*. Boston: Allyn & Bacon.

**Teaching Plan:**

- **Week 1:** Culture, Cultural Identities and Communication, Structuralism and Communication - Ferdinand de Saussure, Media Literacy – Scope and debates
- **Week 2:** Media power and Surveillance - Roland Barthes and Louis Althusser, Media Subversion and Culture Jamming
- **Week 3:** Semiotics : Concept and Ideology, Discourse, ideology and the media, decoding media content
- **Week 4:** Marshall McLuhan’s Theory, Marxism Ideology and the Media, Analytical Theory- Spiral of silence, Information theories - Diffusion Theory
- **Week 5:** Normative Theories- Authoritarian, Libertarian, Social Responsibility, Developmental and Democratic participant, Dependency Theory
- **Week 6:** Cultural Imperialism, Cultivation Theory, Theories of direct and indirect influences- Magic Bullet theory, Limited Effects Theories- Two-step flow theory
- **Week 7:** Ideology and Hegemony - Jurgen Habermas and The Public Sphere
- **Week 8:** Media ideology and societal norms
- Ideology and Representation of Class, Race, gender, ethnicity, religion
- **Week 9:** Propaganda Model - Noam Chomsky’s and media filters
- **Week 10:** Media Effects – Concept and Evolution of Models - Media Framing, Agenda Setting, Priming, Media, Visuals and Narratives- Concepts of exposure, perception and retention
- **Week 11:** Communication Research, Media Effects and exposure - Violence, Gender, Youths, Children
- **Week 12:** Media policy and society – Issues of Political Economy, Copyright, Net Neutrality Debate, Hypercommercialism and Branded Society

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Critically analyze and explain why culture and society are central to media analysis.	Presentation and videos	Analysis of the media content, agendas in media.

<b>2</b>	Provides an introduction to the study of media to better understand how media impact culture and society.	Presentation and readings related to the topic will be shared	Presentation on content analysis and case studies in mass media.
<b>3</b>	Explore how people interpret and interact with media content, and how media influence cultural practices and continue to influence our daily lives.	Presentation and media content from various mass media for understandings	Students identify and explore how people interpret and interact with media content stories
<b>4</b>	Understand the research specific to media studies.	Presentation, select readings related to the topic will be shared, discussion on various research and theories	Participation in discussion will be gauged

## **COMMUNICATION, CULTURE AND SOCIETY**

### **PRACTICAL**

**Marks : 50**

**Duration: 3 Hrs.**

#### **Course Objectives**

To understand the content of media in respect to cultural setting of the society and to develop skills for producing the content of media

#### **Course Learning Outcomes**

Student will be able to-

1. Critically analyze and explain content of various mass media forms
2. Analyze the language, objectivity, and representation of content in mass media
3. Understand the scope and range of oral and visual communication media.
4. To develop skills in designing and use of oral and visual communication media on contemporary development issues for different client groups.

## CONTENTS

## PERIODS

### UNIT I

24

- Analysis and evaluation of media content - Language, objectivity, and representation
- Critique the construction of meaning in the Media
- Analysis of Indian Television Programming
- Analysis of images- Visual Literacy and Photography
- Analysis of Image composition

### UNIT II

24

- Design and production of oral and visual communication media using contemporary techniques and digital technologies for different population segments.
- Learn the use of software and hardware required for oral and visual communication.
- Developing/ modifying traditional forms of oral and visual communication for communicating messages on development issues.
- Development of innovative communication media for different population segments.

### Suggested Readings:

- Croteau, D & William, H. (2014). *Media/Society: Industries, Images, and Audiences*. Thousand Oaks : Sage Publications.
- Hall, S., Evans, J & Nixon S. (Eds) (2013) *Representation: Cultural Representations and Signifying Practices (Culture, Media and Identities series)* London : Sage Publications.
- Hendry, S & Stevenson, E . (2017). *AQA Media Studies for A Level Year 1 & AS: Student Book*. England: Illuminate Publishing.
- Kohli, V . (2017). *The Indian Media Business* (4 Ed). New Delhi : Sage Publications.
- MacBride et al (1980). *Many voices, one world*. Ibadan: University Press
- McQuail, D. (1975). *Communication*. London: Longman.
- Severin, V. G; Tankard, J. W. (1988). *Communication theory: origin methods and uses*.
- Tarrow, J. (2000). (2nd Ed.). *Media systems in society*. New York: Longman Publications.
- Zeuchner, R. (1997) *Communicating Today*. Boston: Allyn & Bacon.

## COMMUNITY ORGANIZATION AND SOCIAL CHANGE THEORY

Marks : 100

Duration: 3 Hrs.

### Course Objectives

To understand the organization and structure of different types of communities and the dynamics of social change.

## Course Learning Outcomes:

Student will be able to -

1. Enhanced understanding of key concepts and perspectives related to community.
2. Appraise the concept of social structure and social systems
3. Understand the process of organizing and building relationships within communities and organizations
4. Exposure to elements and theories of community organization and their mobilization for development goals

## CONTENTS

## PERIODS

### UNIT I: Concept of community and community structures

12

- Concept of Community : Traditional and modern
- Characteristics of Community : Structures and Functions
- Types of communities- tribal, rural and urban and emerging trends
- Changing norms. Mores and customs of communities
- Economic and political systems in contemporary communities
- Theoretical orientation of communities- Functionalism, Structuralism, Social Action theory, Conflict theory.
- Sociological thoughts on community- Marx, Durkheim, Gandhi, Tagore and others

### UNIT II: Community Organization

16

- Concept of Community Organization
- Need, Importance, Principles and new ways of community organization
- Types of Community organizations : Formal & Informal and others
- Role of professional worker in mobilizing communities
- Community organization for management of shared community resources and assets : water, land and forests
- Relationship of community organization and community development
- Approaches and goals of community development-Welfare to rights based approaches
- Community based organizations and their roles in mobilizing people and influencing outcomes
- Concept of CBOs, cooperatives, Federations, RWAs, old age homes, working men and women hostels and other organized community living arrangements
- Community organizations :- Indian and International

### UNIT III: People's Movements and Social Change

10

- People's participation : scope, levels and techniques to engage communities and mobilize them for change
- Stakeholders and people's participation : role of initiatives and innovations
- People's movements : Issues, processes and outcomes
- People's movements related to gender, environment, employment, governance, consumption and others.

#### UNIT IV: Dynamics of Change in Community

10

- Factors contributing to change and transition in the structure and organization of communities
- Rural and urban transformations- issues of tradition and modernity in contemporary context.
- Planned Social Change : Concept and techniques
- Planned change initiatives: successes and failure

#### Suggested Readings:

- Das, V. (Ed.) (2003) *The Oxford Indian Companion to Sociology and Anthropology*. New Delhi: Oxford University Press.
- Ghais, S. (2005). *Process basics : The beginner's guide to facilitation. In Extreme facilitation: Guiding groups through controversy and complexity*. San Francisco, CA: Jossey-Bass
- Handy, C.B. (1983) *Understanding Organizations*. Harmondsworth: Penguin.
- M, Raju . (2012). *Community Organization and Social Action: Social Work Methods And Practices*. New Delhi: Regal Publications.
- Mikkelsen, C. (1995) *Methods for Development Work and Research*. New Delhi: Sage Publications.
- Omvet, G . (1993). *Reinventing Revolution: New Social Movements and the Socialist Tradition in India*. New Delhi: Routledge
- Oommen, T . K. (2010). *Social Movements I: Issues of Identity*. New Delhi: Oxford University Press.
- Oommen, T . K. (2010). *Social Movements II: Concerns of Equity and Security*. New Delhi: Oxford University Press.
- Patil,A . (2013). *Community Organization and Development: An Indian Perspective*. New Delhi: PHI Learning.

#### Teaching Plan:

- **Week 1:** Concept of Community : Traditional and modern, Characteristics of Community : Structures and Functions, Types of communities- tribal, rural and urban and emerging trends
- **Week 2** Changing norms, mores and customs of communities, Economic and political systems in contemporary communities
- **Week 3:** Theoretical orientation of communities- Functionalism, Structuralism, Social Action theory, Conflict theory.
- **Week 4:** Concept of Community Organization, Need, Importance, Principles and new ways of community organization, Indian sociological thoughts on community- Gandhi, Tagore and others.
- **Week 5:** Types of Community organizations : Formal & Informal and others, Role of professional worker in mobilizing communities, Community organization for management of shared community resources and assets : water, land and forests
- **Week 6:** Relationship of community organization and community development, Approaches and goals of community development-Welfare to rights based approaches, Community based organizations and their roles in mobilizing people and influencing

outcomes

- **Week 7:** Concept of CBOs, cooperatives, Federations, RWAs, old age homes, working men and women hostels and other organized community living arrangements, Analysis of selected case studies in community organization : Indian and International
- **Week 8:** People’s participation : scope, levels and techniques to engage communities and mobilize them for change
- **Week 9:** Stakeholder’s analysis for people’s participation : role of initiatives and innovations
- **Week 10:** People’s movements : Issues, processes and outcomes, Analysis of people’s movements related to gender, environment, employment, governance, consumption and others.
- **Week 11:** Factors contributing to change and transition in the structure and organization of communities.
- **Week 12:** Planned Social Change : Concept and techniques,case studies of interventions for planned change : stories of success and failure

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Enhanced understanding of key concepts and perspectives related to community.	Presentation, discussion on perspectives related to community, visit to the community	Participation in discussion will be gauged, secondary review
2	Appraise the concept of social structure and social systems	Presentation,selected readings	Secondary review of the articles shared with them
3	Understand the process of organizing and building relationships within communities and organizations	Presentation,videos, field visit	Assignments, review articles,
4	Exposure to elements and theories of community organization and their mobilization for development goals	Presentation and case study analysis	Participation in case study analysis exercise, open book test

**COMMUNITY ORGANIZATION AND SOCIAL CHANGE  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the organization and structure of different types of communities and the dynamics of Change in the Community.

**Course Learning Outcomes:**

Student will be able to-

1. Enhanced understanding of key perspectives and needs of the community.
2. Critically reflect on the individuals, groups living in the community
3. Appraise the efficacy of Participatory Learning and Appraisal Techniques for eliciting valuable information from community
4. Map the change social structure and social systems using research tools.

**CONTENTS**

**PERIODS**

**UNIT 1:**

**14**

- Orientation to community and community organizations
- Rapport Formation, Skills and methods of community contact
- Community mobilization techniques
- Theoretical Foundation : Working in the community (Groups, Social Structure, Community Dynamics)

**UNIT II :**

**14**

- Participatory Techniques and People's participation
- Using PLA in community (Time based, space based and relation based methods)
- Structured Techniques and Community Issues
  - i. Developing tools and for understanding community issues
  - ii. Application of tools in community situation
  - iii. Analysis of techniques for eliciting participation & understanding issues

**UNIT III:**

**10**

- Analysis of Community Issues
- Need Assessment
- Key dimensions of issue in community, community groups and other stakeholders involved.

**UNIT IV:**

**10**

- Developing a plan for addressing community issues

**Suggested Readings:**

- Das, V. (Ed.) (2003) *The Oxford Indian Companion to Sociology and Anthropology*. New Delhi: Oxford University Press.
- Ghais, S. (2005). *Process basics : The beginner's guide to facilitation. In Extreme facilitation: Guiding groups through controversy and complexity*. San Francisco, CA: Jossey-Bass
- Handy, C.B. (1983) *Understanding Organizations*. Harmondsworth: Penguin.
- M, Raju . (2012). *Community Organization and Social Action: Social Work Methods And Practices*. New Delhi: Regal Publications.
- Mikkelsen, C. (1995) *Methods for Development Work and Research*. New Delhi: Sage Publications.
- Omvet, G . (1993). *Reinventing Revolution: New Social Movements and the Socialist Tradition in India*. New Delhi: Routledge
- Oommen, T . K. (2010). *Social Movements I: Issues of Identity*. New Delhi: Oxford University Press.
- Oommen, T . K. (2010). *Social Movements II: Concerns of Equity and Security*. New Delhi: Oxford University Press.
- Patil,A . (2013). *Community Organization and Development: An Indian Perspective*. New Delhi: PHI Learning.

**SOCIAL POLICY AND DEVELOPMENT  
THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To introduce the students to theoretical and practical inquiry in the field of Social Policy planned interventions and critically analyze contemporary social policies in developed and developing countries.

**Course Learning Outcomes:**

Student will be able to-

1. Exposure to the development of social policies and planned interventions and their impact on the social and administrative organization of countries.
2. Understand the relationships between social policies in developed and developing countries.
3. Use knowledge of agricultural policy and industrialization policy for formulating social policy.
4. Explore the diversity of human needs and societal responses to social injustice and disadvantage

## CONTENTS

## PERIODS

### **UNIT I: Concept of Development** **12**

- Meaning and concept of growth, development and sustainable development. .
- Status, trends and disparities, challenges of sustainable development local, national and global linkages,
- Indicators of development, Characteristics of less developed countries; SDGs and Poverty reduction
- Concept, approaches, measurement of poverty & well being;
- Poverty & issues of inequality, inequity and vulnerability

### **UNIT II: Indian Economic Environment** **16**

- Indian demographic trends and analysis; Rural Urban differentials
- Population transition, Demographic dividend and populations policy
- Indian agriculture- status, prospects and challenges; Agricultural policy; food security and Indian agriculture
- New Economic Policy, Globalization and liberalization, challenges for Indian Economy.
- Industrialization. Industrial policy and impact of globalization on industrial development and international protocols and agreements.

### **UNIT III: Approaches and Perspectives** **16**

- Social policy and social planning for development- national and global perspectives.
- Roles of state and non-state actors in the development and implementation of social policy
- History and trajectory of social policy and social planning in of selected developed and developing countries.
- Analysis of the different directions and emphases on social policy in India (with reference to health care, education, housing, employment and social security).
- Similarities and differences in approaches, evolution and outcomes of policies

### **UNIT IV: Social Policy and Planning** **16**

- Concept and dimensions of economic planning. Economic models and development planning
- Policies programmes and strategies for development- Role and approaches of five year plans economic growth and poverty alleviation
- Issues of capacity, accountability, transparency and their relationship to beneficiary publics and the state in social policy and planning.
- Debt and poverty in social policy, planning and development in developing countries.
- Community participation in social policy, policy changes and approaches to development

### **Suggested Readings:**

- Bessant, J, Watts, R, Dalton, T & Smyth, P. ( 2006). *Talking policy: How social policy is*

made,. Sydney : Allen &Unwin.

- Bhartiya , A & Singh, D. (2009). *Social Policy in India*. Delhi :New Royal Book Company.
- Deacon, B (2007), *Global Social Policy and Governance*, Sage, London,
- Dreze, J. & Sen, A.K. (1995) *India- Economic Development and Social Opportunity*. New Delhi: Oxford University Press.
- Drez, J. (2016). *Social Policy*. New Delhi : Orient Blackswan.
- Ghatak, S. (2003) *Introduction to Development Economics*. London: Routledge
- Hall, A & Midgley, J. (2004). *Social Policy for Development*. London : Sage Publications
- Jalan, B. (1992) *The Indian Economy: Problems and Prospects*. New Delhi: Viking Penguin.
- Sonar, G (2016). *Social Policy, Planning and Development: An Indian Experience* . Germany: LAP LAMBERT Academic Publishing.
- Todaro, M.P. & Smith, S. (1985) *Development in the Third World*. New Delhi: Orient Longman.

### Teaching Plan:

- **Week 1:** Meaning and concept of growth vs development. indicators of development, characteristics and features of less developed countries, Social policy and social planning for development, formulation and implementation of social policy at the local, national and global levels.
- **Week 2:** Approaches to the understanding of poverty, well being and exclusion, welfare, sustainable livelihoods, roles of state and non-state actors in the development and implementation of social policy and social planning at local, national, regional and international levels.
- **Week 3:** Constraints on growth- issues of population, income distribution, poverty, unemployment, inequality, and migration, Role, importance and organization of Indian agriculture. Agricultural policy, problems and prospects of food security and Indian agriculture
- **Week 4:** Role, Importance and problems of industrialization. Industrial policy and impact of globalization on industrial development. Issues and correlates of health, education, environment degradation and gender on development.
- **Week 5:** Aspects of sustainable development- status, trends and disparities, challenges of sustainable development- socio-political, economic and cultural perspectives; local, national and global linkages, poverty reduction and SDGs
- **Week 6:** Theories and debates related to societies undergoing rapid urban change. Relationship between a country and a city.
- **Week 7:** Historical process by which social life outside cities become urbanized. Radical political change and social experimentation. Migration and urban-rural interface
- **Week 8:** Urban poverty and livelihoods; labour market and housing; Urban social movements; urban basic services; urban management and governance
- **Week 9:** Concept and dimensions of economic planning. Economic models and development planning
- **Week 10:** Policies programmes and strategies for development- Role and approaches of five year plans economic growth and poverty alleviation

- **Week 11:** New Economic Policy, Globalization and liberalization- Impact on India, challenges for Indian Economy. Issues of capacity, accountability, transparency and their relationship to beneficiary publics and the state in social policy and planning.
- **Week 12:** Debt and poverty in social policy, planning and development in developing countries. Community participation in social policy, policy changes, approaches to development

**Facilitating the achievement of Course Learning Outcomes:**

<b>Unit.No</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning activity</b>	<b>Assessment tasks</b>
<b>1</b>	Exposure to the development of social policies and planned interventions and their impact on the social and administrative organization of countries.	Classroom discussions, presentation	Review of journal articles, quiz
<b>2</b>	Understand the relationships between social policies in developed and developing countries.	Classroom discussions, videos, presentation	Term paper, review the given journal article.
<b>3</b>	Use knowledge of agricultural policy and industrialization policy for formulating social policy.	Presentations, group discussion	Participation in group discussion, review the given journal article
<b>4</b>	Explore the diversity of human needs and societal responses to social injustice and disadvantage	Discussion on select readings, presentation	Assignment, review a journal article/quiz

## **SEMESTER II**

<b>SEMESTER II</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 5 DCECC201: Statistics and Computer Applications	4	2		6
Core course 6 DCECC202: Theories of Human Behavior	4	2		6
Core course 7 DCECC203: Organizational Management and Training		4		4
Core course 8 DCECC204: Gender and Development	4			4
Core course 9 Integrated Practical DCECC205: Dialoguing Change I A. Training and Capacity Building B. Radio for Development		4		4
Total credits in core course	24			
Number of Open Electives	Credits in each open elective			
	Theory			Credits
Open Elective : DCEOE201: Organization Communication: Processes and Techniques	2			2
Total credits in open elective	2			
<b>Total credits in Semester II 26</b>				

# STATISTICS AND COMPUTER APPLICATIONS THEORY

**Marks: 100**

**Duration: 3 Hrs.**

## **Course Objectives**

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

## **Course Learning Outcomes**

Student will be able to-

1. Differentiate between the qualitative and quantitative methods of analysis of data
2. Suitably apply data reduction strategies and illustrate data using various graphical methods
3. Use appropriate parametric and non parametric statistical tests
4. Draw conclusions and interpretations from the analysis of data using various statistical softwares

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I: Introduction to statistics</b>	<b>4</b>
<ul style="list-style-type: none"><li>• Basic principles and concepts in statistics</li><li>• Orientation to qualitative and quantitative research procedures</li><li>• Measurement and computation- Scales of measurement, Reliability and validity</li></ul>	
<b>UNIT II: Organisation and presentation of data</b>	<b>10</b>
<ul style="list-style-type: none"><li>• Qualitative and quantitative data- Coding &amp; data reduction strategies</li><li>• Organisation of Data: Frequency distributions vs. thematic analysis</li><li>• Percentage, percentile ranking and frequencies</li><li>• Univariate, bivariate and multivariate tables</li><li>• Graphic representation: Graphs, diagrams and charts</li></ul>	
<b>UNIT III: Descriptive Statistics</b>	<b>6</b>
<ul style="list-style-type: none"><li>• Applications of descriptive statistics</li><li>• Measures of Central tendency and Variability</li></ul>	
<b>UNIT IV: Probability and normal distribution</b>	<b>12</b>
<ul style="list-style-type: none"><li>• Basic principles and applications of probability</li><li>• Normal curve</li><li>• Characteristics of distributions: Skewness, kurtosis</li><li>• Testing hypotheses: Levels of significance and p values</li><li>• Errors in hypothesis testing: Type I, Type II</li><li>• Sampling distribution</li></ul>	

- Standard scores, calculation and application

### UNIT V: Statistical tests

12

- Concept of parametric and non-parametric tests, statistical tests and level of measurement
- Parametric tests of difference: T test, ANOVA and post hoc analysis of significance
- Parametric tests of association: Pearson's product moment  $r$
- Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis
- Non-parametric tests of association: Spearman's  $r$
- Chi-square test
- Regression and its applications
- Tests for ascertaining reliability of instruments

### UNIT VI: Analysis and interpretation

4

- Guidelines for selecting an appropriate test
- Interpreting results- Statistical inference
- Research Conclusion and recommendations

### Suggested Readings:

- Agresti, A. & Franklin C.A. (2009) *Statistics: The Art and Science of Learning from Data* ( Second Edition) Boston,MA: Pearson Prentice Hall, ISBN 978-0-13-513199-2
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage.
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.
- Diez, D. M., Barr, C. D., Cetinkaya-Rundel M. (2015). *OpenIntro Statistics*:(Third Edition). CreateSpace Independent Publishing Platform. ISBN-10: 194345003X, ISBN-13: 978-1943450039 <http://www.openintro.org/stat/textbook.php>.
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Fowler, F.J. (1988). *Survey Research Methods. Applied Social Research Methods Series, Vol. 1*. Newbury Park, CA: Sage.
- Greene, S. and Hogan, D. (Eds.). (2005). *Researching Children's Experiences: Methods and Approaches*. London: Sage.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier,
- Minium, E. W., King, B. M., & Bear, G. (1995/2004). *Statistical Reasoning for Psychology and Education*. New York: Wiley and Sons.
- Muijs, D. (2004). *Doing Quantitative Research in Education with SPSS*. London: Sage.

### Teaching plan:

- **Week 1:** Basic principles and concepts in statistics, Orientation to qualitative and quantitative research procedures, Scales of measurement, Reliability and validity

- **Week 2:** Qualitative and quantitative data- Coding and data reduction strategies, Organisation of Data: Frequency distributions vs. thematic analysis
- **Week 3:** Percentage, percentile ranking and frequencies, Univariate, bivariate and multivariate tables
- **Week 4:** Graphic representation: Graphs, diagrams and charts, Applications of descriptive statistics
- **Week 5:** Measures of Central tendency and Variability
- **Week 6:** Basic principles and applications of probability ,Normal curve
- **Week 7:** Characteristics of distributions: Skewness, kurtosis, Testing hypotheses: Levels of significance and p values
- **Week 8:** Errors in hypothesis testing: Type I, Type II, sampling distribution standard scores, calculation and application
- **Week 9:** Concept of parametric and non-parametric tests, statistical tests and level of Measurement, Parametric tests of difference: T test, ANOVA and post hoc analysis of significance
- **Week 10:** Parametric tests of association: Pearson's product moment r, Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis
- **Week 11:** Non-parametric tests of association: Spearman's r, Chi-square test, Regression and its applications, Tests for ascertaining reliability of instruments
- **Week 12:** Guidelines for selecting an appropriate test, Interpreting results- Statistical inference, Research Conclusion and recommendations

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the basic concepts, theories and methods in statistics and Differentiate between the qualitative and quantitative methods of analysis of data	Unit transaction through power point presentations,	Assignments, Open book test
2.	Suitably apply data reduction strategies and illustrate data using various graphical methods	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test
3.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test

4.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
5	Use appropriate parametric and non-parametric statistical tests	Unit transaction through power point presentations and classroom discussion	Class assignments and quizzes
6	Draw conclusions and interpretations from the analysis of data	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test

## STATISTICS AND COMPUTER APPLICATIONS PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

### Course Objectives

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

### Course Learning outcomes:

Student will be able to-

1. Identification of various types of data measurement tools/tests/procedures and understanding the concept of standardisation and reliability and validity.
2. Application of various data reduction and coding methods on quantitative and qualitative data.
3. To be able to organise the data and effectively use appropriate quantitative and qualitative statistical softwares for analysis of data
4. Draw conclusions and interpretations from the analysed data and write reports.

### Teaching plan:

- **Week 1, 2 and 3** - Review of Measurement tools/tests/procedures: Standardisation, Reliability, Validity
- **Week 4 and 5** - Data reduction strategies and Coding of quantitative and qualitative data
- **Week 6, 7, 8 and 9** - Analysis of data using appropriate statistical software (, Qualitative and quantitative open source software)
- **Week 10** - Data Visualization

- **Week 11 and 12** - Data Interpretation and report writing

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	<b>Week 1 &amp; 2</b> Identification of various types of data measurement tools/tests/procedures and understanding the concept of standardisation and reliability and validity	Standard tools/test methods and procedures will be reviewed to understand concepts of reliability and validity	Standardised tools will be given to students and activities will be planned to understand the concept of standardisation and determination of reliability and validity
2	<b>Week 3</b> Introduction to computer tools and software in statistical analysis	Open source and other software for quantitative and qualitative data analysis will be reviewed and students will be made familiar about their use	Students gets familiarized with basic functions and tools of any statistical software
3.	<b>Week 4 and 5</b> Application of various data reduction and coding methods on quantitative and qualitative data.	Data collected using standard measurement tools will be organised using appropriate data reduction strategies and coded	Data organisation through spread sheets – manually and using computers. Display of data using graphical representation methods.  Data is collected, coded and formulates tables using appropriate software
3.	<b>Week 6,7 8 and 9</b> To be able to organise the data and effectively use appropriate quantitative and qualitative statistical	Data analysis using suitable quantitative and qualitative software	Assignments to be planned using statistical software for  Data entry and its

	softwares for analysis of data		analysis. Use of statistical test for analysis
4.	<b>Week 10, 11 and 12</b> Draw conclusions and interpretations from the analysed data and write reports	Data interpretation and Report writing	Assignments on interpretation of the analysed data Statistical conclusion and Research conclusion

## CONCEPTS AND THEORIES OF HUMAN BEHAVIOUR

**Marks: 100**

**Duration: 3 Hrs.**

### Course Objectives:

To understand the functioning of human behaviour and psychology and appreciate the process of Social and Behaviour Change Communication and different paradigm shifts in its conceptual framework.

### Course Learning outcomes:

Student will be able to-

1. Understand the multi-disciplinary approaches to human behaviour and related theories.
2. Exposure to the concept of Behavioural economics and its relevance today.
3. Gain holistic understanding of process of Social and Behaviour Change Communication and Advocacy and its applications.
4. Review the different theories of Behaviour Change Communication and its application in strategizing communication for change.

## CONTENTS

## PERIODS

### UNIT I: Multi-Disciplinary Approaches to Human Behaviour

12

- Learning and Human Behaviour : Types of behaviour, Learning theories and human behaviour
- Personality and Human Behaviour
- Perception, Persuasion and Thinking
- Motives : Types, Motivation theories and human behaviour
- Attitude- Definition, formation, Mapping attitudes : models & theories
- Social Behaviour and social norms

## **UNIT II: Behavioural Economics** **12**

- Introduction to behavioural economics : Concept & Principles
- Psychological aspects of individuals and decision making and choice,
- Heuristics & Biases, Inattention & Shrouding, Nudging and Framing
- Theories of Behavioural Economics: Decision Theory, Prospect Theory, Nudge Theory, Behavioural Game Theory, Evolutionary Psychology and others.
- Applications of Behavioural economics and Social and Behavioural Change Communication
- Behavioral Welfare Analysis

## **UNIT IV: Behaviour Change Communication & Advocacy** **12**

- Behaviour Change Communication : Concept
- Difference between IEC, BCC and SBCC
- Principles, Process and Approaches to BCC.
- Paradigm shifts to SBCC : scope and relevance.
- Advocacy : Concept, Process & Techniques

## **UNIT III: Behaviour Change Communication : Theories and Models** **12**

- Key concepts in BCC Theory : Individual and Social, Control, Threat, Risk, Reflection, Deliberation and Technologies & Innovation.
- Participatory theories and EE theories, Bullet Behavioural Theory
- Theories of Individual Behaviour Change : Theory of Planned Behaviour and Theory of Reasoned Action, Socio-ecological model, Health Belief Model, Stages of Change theory.
- Social and technological theories of Behaviour Change : Bandura's Social Learning Theory, Social Practice Theory, Diffusion of Innovation, ANT Theory and others.
- Application of SBCC theories in strategizing communication for change : Design of communication strategies and messages

### **Suggested Readings:**

- Andreason, A. (1995) *Marketing Social Change*. San Francisco, CA: Jossey Bass (AA)
- Ashford, J. B., LeCroy, C. W., & Lortie, K.L. (2010). *Human Behavior in the Social Environment: A Multidimensional Perspective* (4th ed.). Belmont CA: Wadsworth/Thomson Learning
- Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-efficacy in changing societies*, pp. 1–45. New York: Cambridge University Press.
- Feldman, R. S. (2009). *Discovering the life span*. Upper Saddle River, NJ: Pearson.
- Hutchison, E.D. (2008). *Dimensions of human behavior: Person and environment*, 3rd Ed. (pp. 1–24). Los Angeles, CA: SAGE. ON eRESERVES
- Kotler, P. & Lee, N. (2011). *Social Marketing: Influencing Behaviors for Good*, 4th Ed. Thousand Oaks, CA: Sage Publications. (K&L)
- Pervin, L. A., Cervone, D., & John, O. P. (2005). Social-Cognitive Theory: Bandura and Mischel. (Chapter 12 of *Personality: Theory and Research, 9th Edition*, pp. 415–456;

Hoboken, NJ: John Wiley & Sons, Inc.).

- Wilkinson, N. & Klaes, M. (2012). *An Introduction to Behavioral Economics*. UK : Palgrave Macmillan.

**Teaching Plan:**

- **Week 1:** Learning and Human Behaviour : Types of behaviour, Learning theories and human behaviour, Personality and Human Behaviour
- **Week 2:** Perception, Persuasion and Thinking  
Motives : Types, Motivation theories and human behaviour
- **Week 3:** Attitude- Definition, formation, Mapping attitudes : models & theories  
Creativity and Behaviour, Social Behaviour and social norms
- **Week 4:** Introduction to behavioural economics : Concept & Principles  
Psychological aspects of individuals and decision making and choice, Heuristics & Biases, Inattention & Shrouding, Nudging and Framing
- **Week 5:** Theories : Decision Theory, Prospect Theory, Nudge Theory, Behavioural Game Theory, Evolutionary Psychology and others
- **Week 6:** Applications of Behavioural economics and SBCC  
Behavioral Welfare Analysis
- **Week 7:** Behaviour Change Communication : Concept, Difference between IEC, BCC and SBCC, Principles, Process and Approaches to BCC.
- **Week 8:** Paradigm shifts to SBCC : scope and relevance.  
Advocacy : Concept, Process & Techniques
- **Week 9:** Key concepts in BCC Theory : Individual and Social, Control, Threat, Risk, Reflection, Deliberation and Technologies & Innovation,
- **Week 10:** Participatory theories and EE theories, Bullet Behavioural Theory
- **Week 11:** Theories of Individual Behaviour Change : Theory of Planned Behaviour and Theory of Reasoned Action, Health Belief Model, Stages of Change theory.
- **Week 12:** Social and technological theory of Behaviour Change : Bandura’s Social Learning Theory, Social Practice Theory, Diffusion of Innovation, ANT Theory, Application of SBCC theories in strategizing communication for change: Design of communication strategies and messages

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Understand the multi-disciplinary approaches to human behaviour and related theories.	Classroom discussions,presentations	Quiz,review of journal articles
2	Exposure to the concept of Behavioural economics and its relevance today.	Discussion on select readings ,presentation	Group discussion, review journal article

<b>3</b>	Gain holistic understanding of process of Social and Behaviour Change Communication and Advocacy and its applications.	Classroom discussions, videos , presentation	Term paper ,Quiz/open book test
<b>4</b>	Review the different theories of Behaviour Change Communication and its application in strategizing communication for change.	Presentations,group discussion,videos	Participation in group discussion will be gauged, Case study analysis

## **CONCEPTS AND THEORIES OF HUMAN BEHAVIOUR**

### **PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

#### **Course Objectives:**

To gain a practical understanding of the process of Social and Behaviour Change Communication and its application in strategizing communication for change.

#### **Course Learning outcomes:**

Student will be able to-

1. Understand the multi-disciplinary approaches to human behaviour and related theories.
2. Exposure to the concept of Behavioural economics and its relevance today.
3. Gain holistic understanding of process of Social and Behaviour Change Communication and Advocacy and its applications.
4. Review the different theories of Behaviour Change Communication and its application in strategizing communication for change.

#### **CONTENTS**

#### **PERIODS**

##### **UNIT 1**

**12**

- Personality and Human Behaviour : Assessment and relevance
- Perception, Learning and Thinking : How perception makes a difference in understanding and interpreting communication messages
- Motivation : Assessment of motivation and relevance
- Attitude measurement and relevance

## UNIT II

12

- Psychological aspects of individuals and decision making and choice,
- Identifying Heuristics & Biases, Inattention & Shrouding, Nudges and Framing in social and behavioural marketing/economics
- Behavioral Welfare Analysis

## UNIT III

12

- Difference between IEC, BCC and SBCC
- Formation of Behavioural and Communication objectives and foreseeing behavioural and communication output and outcome.
- Approaches to BCC : Identifying what works and what does not
- SBCC toolkit
- Advocacy : Analysis of advocacy campaigns and tools

## UNIT IV

12

- Analysing the application of SBCC theories in strategizing communication for change through documented case profiles and videos
- Analysis of campaign's theory of change messages using behavioural theories

### Suggested Readings:

- Agrawal, P.K., K. Aruldas & M.E Khan,. 2014. *Training Manual on Basic Monitoring and Evaluation of Social and Behavior Change Communication Health Programs*. New Delhi: Population Council.
- Ashford, J. B., LeCroy, C. W., & Lortie, K.L. (2010). *Human Behavior in the Social Environment: A Multidimensional Perspective* (4th ed.). Belmont CA: Wadsworth/Thomson Learning
- Feldman, R. S. (2009). *Discovering the life span*. Upper Saddle River, NJ: Pearson.
- Health Communication Capacity Collaborative HC3 (2016). *Social and Behavior Change Communication for Emergency Preparedness Implementation Kit*. © 2016, Johns Hopkins Center for Communication Programs
- Hutchison, E.D. (2008). *Dimensions of human behavior: Person and environment*, 3rd Ed. (pp. 1–24). Los Angeles, CA: Sage on E-reserves.
- Kotler, P. & Lee, N. (2011). *Social Marketing: Influencing Behaviors for Good*, 4th Ed. Thousand Oaks, CA: Sage Publications. (K&L).
- USAID & FHI. (2002). *Behavior Change Communication (BCC) for HIV/AIDS: A Strategic Framework*. Arlington,U.S.A : Family Health International Institute for HIV/AIDS.
- USAID. (2010). *Behavior Change Communication (Bcc). Learning Resource Package Facilitator's Guide*.

# **ORGANISATIONAL MANAGEMENT AND TRAINING THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

## **Course Objectives:**

To provide students with a better understanding of management, behavioural processes of organisations and training thereby enabling them to function more effectively in their present or future roles as managers and trainers of human resources.

## **Course Learning Outcomes:**

Student will be able to -

1. Identify the nature and role of various organizations engaged in the development sector.
2. Appraise the various strategies for creating resources for effective functioning of development organizations.
3. Conceptualize the training process, roles and functions of different phases of the training process.
4. Critically evaluate the different training strategies and their role in promoting development.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Management of Development Organizations**

**12**

- Vision, mission, genesis, values and work culture, ideological and legal frameworks.
- Organizational structure, processes and dynamics in development organizations.
- Motivations of personnel : theories and perspectives.
- Leadership in development organizations -concepts nature, leadership styles and models. NGO leaders and community leaders.
- Organizational context and issues of transparency, accountability and efficiency in programme delivery.

### **UNIT II: Resource mobilization for Development Organisations**

**12**

- Agencies funding development programmes, Types, nature of support, inter sectoral partnerships and synergies.
- Fundraising- importance, nature, sources and techniques. Principle and theories of fundraising
- Non-financial donations and in-kind giving- nature, sources, impact on development initiatives
- Corporate Social Responsibility- historical and contemporary perspectives. Dimensions of CSR. Corporate partnerships for development.
- Volunteers: importance, role and participation in development programmes, building volunteering in society.
- Issues of ethics accountability and transparency in resource mobilization and fund raising
- Writing project proposals for grants, developing fund raising plans and strategies.

### UNIT III: Training for Development

12

- Importance and scope of training for development- national and global perspectives.
- Types, models and methods of training and learning.
- Roles and competencies of a trainer.
- Training and capacity building of stakeholders in development

### UNIT IV: Training Strategies and Design

12

- Phases of the training process
- Training need assessment- techniques and their implications
- Designing training programmes for development- objectives, contents methods, materials and resources.
- Evaluation and Follow up: Types, components, techniques and indicators. Post training factors- cost, organizational support and other factors facilitating training.

#### Suggested Readings:

- Burkley, S. (1993) *People First: A Guide to Self Reliant Participatory Development*. London: Zed Books.
- Chakravarty, S. (2000) *Development Planning*. New Delhi: Oxford Publishers.
- Culshaw, M. (2000) *Getting Started in Fund Raising*. New Delhi: Sage Publications.
- Fowler, A . (2001). *The Virtuous Spiral. A Guide to Sustainability for NGO's in International Development*. London:Routledge.
- Lakey, B.G; Napier, R., and Robinson, J. (1995) *Grassroots and Nonprofit Leadership:A Guide for Organizations in Changing Times*. Gabriola Island, B.C: New Society Publishers.
- Pareek, U. (1989) *Behavioral Process in Organizations*. New Delhi: Oxford and IBH.
- Lyton, R; Pareek, U. (1990) *Training for Development*. New Delhi: Vistaar Publications.
- Lyton, R; Pareek, U. (1992) *Facilitating Development*. New Delhi: Sage Publications.
- Mikkelsen, Britha, (2002). *Methods For Development Work and Research*. New Delhi: Sage Publications.
- Mullins, L . (2016). *Management & Organisational Behaviour 10* . England:Pearson.
- Subedi, N R, (2008). *Advocacy Strategies and Approaches: A Training of Trainers Manual. International* . Nepal :ICIMOD.
- Dhama, O.P. and Bhatnagar, O.P., (2003), *Education and Communication for Development*. New Delhi :Oxford and IBH Publishing Co. Pvt. Ltd.

#### Teaching Plan:

- **Week 1:** Development organizations- vision, mission, genesis, values and work culture, NGO formation- ideological and legal frameworks, Structure, processes and dynamics in development organizations, structure, design and culture, transparency, accountability and efficiency in programme delivery.
- **Week 2:** Motivations of personnel in development organizations- nature, importance, theories and perspectives,

- **Week 3:** Leadership in development organizations -concepts nature, leadership styles and models. NGO leaders and community leaders.
- **Week 4:** Types of agencies funding development programmes, nature of support, inter sectoral partnerships and synergies.
- **Week 5:** Fundraising- importance, nature, sources and techniques. Principle and theories of fundraising. Non-financial donations and in-kind giving- nature, sources, impact on development initiatives.
- **Week 6:** Corporate Social Responsibility- historical and contemporary perspectives. Dimensions of CSR. Corporate partnerships for development.
- **Week 7:** Volunteers and paid staff: importance, role and participation in development programmes, building volunteering in society.
- **Week 8:** Issues of ethics accountability and transparency in resource mobilization and fund raising, writing project proposals for grants and developing fund raising plans and strategies.
- **Week 9:** Importance and scope of training for development- national and global perspectives. Types, models and methods of training and learning.
- **Week 10:** Roles and competencies of a trainer, Training and capacity building of stakeholders in development, Phases of the training process
- **Week 11:** Training need assessment- techniques and their implications  
Designing training programmes for development- objectives, contents methods, materials and resources.
- **Week 12:** Evaluation and Follow up: Types, components, techniques and indicators. Post training factors- cost, organizational support and other factors facilitating training.

### Facilitating the achievement of Course Learning Outcomes:

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Identify the nature and role of various organizations engaged in the development sector.	Classroom discussions, presentation ,videos	Review of journal articles,review case studies
2	Appraise the various strategies for creating resources for effective functioning of development organizations.	Classroom discussions, presentation ,videos	Term paper ,review of journal articles/quiz
3	Conceptualize the training process, roles and functions of different phases of the training process.	Classroom discussions, presentation ,videos	Participation in group discussion, class test/assignment /analysis of videos

<b>4</b>	Critically evaluate the different training strategies and their role in promoting development	Discussion on selected readings , presentation , videos	Participation in group discussion ,analysis of training sessions

## GENDER AND DEVELOPMENT THEORY

**Marks : 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To offer a broad outline with regard to the nature and growth of gender issues in the today's world, covering a range of issues pertinent to emancipation, dignity and status of women.

### **Course Learning Outcomes:**

Student will be able to -

1. Examine the concept, need, relevance and dimensions of gender empowerment.
2. Recognize the gender disparities/imbances and problems.
3. Develop an insight into issues and strategies at different levels for empowering women.
4. Appraise the international and national support systems for women's development.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Sociology of Gender**

**10**

- Concept of gender, difference between sex and gender
- Cultural construction of gender- socialization and gender roles-historical and contemporary perspectives
- Patriarchy and gender relations
- Changing status of women- influencing factors, role of women's movements
- Feminism, Feminist theories and gender perspectives
- Demographic analysis, Demarcations and differentials - variations and influencing factors.

#### **UNIT II: Gender and Development Perspectives**

**14**

- Concept and importance of women's development
- Role and participation of women in development.
- Problems, vulnerabilities and marginalization of women– lifecycle approach
- Issues and impact of marriage and kinship systems socio cultural practices, health, education, livelihood, poverty– access and control of resources on women's lives.
- Theoretical frameworks and approaches towards women and development.
- Women and National Policies

### **UNIT III : Gender Issues and Empowerment**

12

- Violence in women's lives- concept, nature, impact
- Women and work- invisibility, opportunities and participation in workforce
- Women and education, health & nutrition
- Gender & Natural Resources – water, forestry, agriculture and climate change, Common Property Rights
- Political participation of women and leadership

### **UNIT IV: Gender and Advocacy**

12

- Human Rights and women- women's right to development.
- Gender and Law- Laws governing gender empowerment-social, legal and political perspectives. Issues of enforcement of laws and women's protection.
- Role of government, civil society organizations and other stakeholders for empowerment of women
- Women's empowerment and Media- Imaging gender by Media, Women as producers and consumers of media.
- Gender Responsive Budgeting and Gender Analysis Frameworks
- International and national initiatives in gender sensitization and supporting women

### **Suggested Readings:**

- Beauvoir, S . (2015). *The Second Sex*. London: Vintage Books.
- Chattopadhyay, S (2018). *Gender Socialization and the Making of Gender in the Indian Context*. New Delhi: Sage Publications.
- Dube, L. (2001) *Anthropological Explorations in Gender-Intersecting Fields*. New Delhi:Sage Publications.
- Ghadially, R (1989). *Women in India Society: A Reader*. New Delhi: Sage Publications.
- Ghadially, R (2007). *Urban Women in Contemporary India*. . New Delhi: sage Publications
- Goel, A. (2004) *Education & Socio-Economic Perspectives of Women Development and Empowerment*. New Delhi: Deep & Deep.
- Goel, A. (2004) *Organisation & Structure of Women Development and Empowerment*. New Delhi: Deep & Deep
- Goel, A. (2004) *Violence and Protective Measures for Women Development and*
- Kishwar, M. (1994) *Off the Beaten Track – Rethinking Gender Justice for Indian Women*. Mumbai: Oxford University Press.
- Krishna, S. (Ed) (2003) *Livelihood and Gender Equality in Community Resource Management*. New Delhi: Sage Publications
- Mikkelsen, C. (1995) *Methods for Development Work and Research*. New Delhi: Sage Publications.
- Powell, G. (1999) *Handbook of Gender & Work*. London: Sage Publications .

**Teaching Plan:**

- **Week 1:** Concept of gender, difference between sex and gender, cultural construction of gender- socialization and gender roles-historical and contemporary perspectives Patriarchy and gender relations, Changing status of women- influencing factors, role of women's movements.
- **Week 2:** Feminism, Feminist theories and gender perspectives, demographic analysis, demarcations and differentials - variations and influencing factors.
- **Week 3:** Concept and importance of women's development, role and participation of women in development, problems, vulnerabilities and marginalization of women– lifecycle approach
- **Week 4:** Issues and impact of marriage and kinship systems, socio cultural practices, health, education, livelihood, poverty– access and control of resources on women's lives.
- **Week 5:** Theoretical frameworks and approaches towards women and development. Women and National Policies
- **Week 6:** Women and education, health & nutrition , violence in women's lives- concept, nature, impact
- **Week 7:** Women and work- invisibility, opportunities and participation in workforce, Gender & Natural Resources – water, forestry, plantation, agriculture and climate change, Joint Forest Management
- **Week 8:** Political participation of women and leadership, human Rights and women-women's right to development.
- **Week 9:** Gender and Law- Laws governing gender empowerment-social, legal and political, perspectives, issues of enforcement of laws and women's protection.
- **Week 10:** Women's empowerment and Media- Imaging gender by Media, Women as producers and consumers of media.
- **Week 11:** Gender Responsive Budgeting, Gender Analysis Frameworks
- **Week 12:** International and national initiatives in gender sensitization and supporting women, Role of government, civil society organizations and other stakeholders for empowerment of women

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Examine the concept, need, relevance and dimensions of gender empowerment.	Classroom discussions,presentation , videos	Quiz,review of journal articles/case studies
2	Recognize the gender disparities/imbances and problems.	Classroom discussions,recorded Ted Talks, presentation	Term paper ,review of journal articles

<b>3</b>	Develop an insight into issues and strategies at different levels for empowering women.	Presentations,group discussion,screening of film	Participation in group discussion ,film analysis
<b>4</b>	Appraise the international and national support systems for women's development.	Discussion on select readings ,presentation/ videos	Participation in group discussion ,quiz/open book test

### **DIALOGUING CHANGE I INTEGRATED PRACTICAL**

**Marks : 100**

**Duration: 6 Hrs.**

**Course objectives:**

To understand and evaluate different training methods and develop skills for radio production and broadcasts.

**Course Learning Outcomes:**

Student will be able to -

1. Understand and critically evaluate the different training methodologies and their suitability for development goals.
2. Conceptualize the training process and understand the roles and functions of different phases of the training process.
3. Develop an understanding of the radio production process: research, planning, and production.
4. Develop skills for producing radio features, documentaries and radio news reports, anchoring, commentary and other radio broadcasts.

### **PART A: TRAINING & CAPACITY BUILDING**

**CONTENTS**

**PERIODS**

**UNIT I**

**12**

- Plan and conduct self development exercises for trainers.
- Develop skills in transacting different training methodologies.
- Gain proficiency in the use of ICTs and other resources required for conducting trainings.

## UNIT II

12

- Design, execution and evaluation of training programmes for different groups on:
  - self development
  - organizational development,
  - team building, leadership development
  - skill and technology transfer
- Developing and evaluating the efficacy of training modules
- Visit to training and development organizations.

### Suggested Readings:

- Janakiram,B (2007). *Training and Development*. New Delhi : Biztantra
- Lyton, R; Pareek, U. (1990) *Training for Development*. New Delhi: Vistaar Publications.
- Lyton, R; Pareek, U. (1992) *Facilitating Development*. New Delhi: Sage Publications.
- Subedi, N R, (2008). *Advocacy Strategies and Approaches: A Training of Trainers Manual. International* . Nepal :ICIMOD.

## PART B: RADIO FOR DEVELOPMENT

### UNIT I: Media Appreciation

12

- Critical analysis of radio spots, news and features
- A discussion on the perception of radio programming among listeners.
- Functioning and branding of public and private radio channels
- Content analysis of radio channels

### UNIT II: Radio Production

12

- Research, planning for radio production: Writing and Scripting for radio news,
- features and documentaries - style, language and skills
- Radio production-Basic principles of Radio program production, Types and
- Formats of radio programs, basic production techniques, production of radio
- features, documentaries.
- Radio news - characteristics of radio news, their comparison with print news
- Production of radio News bulletin- Radio news gathering, compilation and
- writing
- Develop radio documentary on different social issues focusing
- Post Production: editing

### Suggested Readings:

- Brown (1983). *A.V. Instructional Technology- Media and Method (6th Ed)*. New York: McGraw Hill Book Co.
- Ghosh, A. (2006). *Communication Technology and Human Development-Recent Experiences in the Indian Social Sector*. New Delhi: Sage Publications
- Ravindran, R.K. (1999). *Handbook of Radio, TV and Broadcast Journalism*. New Delhi: Anmol Publications

- Mody, B. (1991) Designing Messages for Development Communication. New Delhi: Sage Publications.

## **ORGANIZATION COMMUNICATION: PROCESSES AND TECHNIQUES THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

### **Course Objectives**

To experience the dimensions in organizational communication and to build understanding about the processes and techniques of organizational communication

### **Course Learning Outcomes**

Student will be able to -

1. Understand and explain the elements of organizational communication
2. Communicate competently with credibility and confidence
3. Build relationship and specifically with your working group members
4. Prepare and deliver effective presentations

### **CONTENT**

### **PERIODS**

#### **UNIT 1 :Communication Dynamics**

**12**

- Workplace communication- Principles and Methods
- Organizational Communication- types, tools , techniques and conflict resolution
- Networks of communication
- Significance of technical communication
- Listening, Perception, Persuasion as communication skills
- Barriers to effective communication- Professional Relationships And Group Communication

#### **UNIT 2: Communication Skills**

**12**

- Reading Skills: Previewing techniques; Skimming; Scanning; Understanding the gist of an argument; Identifying the topic sentence; Inferring lexical and contextual meaning; recognizing coherence and sequencing of sentences; Improving comprehension skills.
- Writing Skills: Sentence formation; Use of appropriate diction; Paragraph and Essay Writing; Coherence and Cohesion.
- Technical Writing: Differences between technical and literary style, Elements of style; Common Errors.
- Report Writing: Basics of Report Writing; Structure of a report; Types of reports.
- Technology-based Communication: Netiquettes: effective e-mail messages; power-point presentation; enhancing editing skills using computer software

### **UNIT 3: Professionalism at Work**

**12**

- Teamwork, meetings
- Speaking skills
- Speaking in Public
- Business Presentation skills

### **UNIT 4: Core Skills in Public Relations**

**12**

- Public Relations- concept and significance
- PR Tools- interpersonal, mass media and selective media
- PR & Media Relations

#### **Suggested Readings:**

- Allan,P & Pease,A. (2005). *The Definitive Book of Body Language*. New Delhi: Manjul Publishing House.
- Bovee, L., Thill,J and Schatzman,B.(2004). *Business Communication Today*. Delhi: Pearson Education.
- Oliver, S. (2004). *Handbook of corporate communication and public relations: pure and applied*. UK: Routledge
- Seeger, M. W., Sellnow, T. L.; Ulmer, R. R. (2003). *Communication and organizational crisis*. CT: Greenwood Publishing Group

#### **Teaching Plan:**

- **Week 1:** Workplace communication- Principles and Methods, Organizational Communication- types, tools , techniques and conflict resolution
- **Week 2:** Networks of communication, Significance of technical communication
- **Week 3:** Listening, Perception, Persuasion as communication skills, Barriers to effective communication- Professional Relationships And Group Communication
- **Week 4:** Reading Skills: Previewing techniques; Skimming; Scanning; Understanding the gist of an argument; Identifying the topic sentence; Inferring lexical and contextual meaning; recognizing coherence and sequencing of sentences; Improving comprehension skills.
- **Week 5:** Writing Skills: Sentence formation; Use of appropriate diction; Paragraph and Essay Writing; Coherence and Cohesion.
- **Week 6:** Technical Writing: Differences between technical and literary style, Elements of style; Common Errors.
- **Week 7:** Report Writing: Basics of Report Writing; Structure of a report; Types of reports.
- **Week 8:** Technology-based Communication: Netiquettes: effective e-mail messages; power-point presentation; enhancing editing skills using computer software
- **Week 9:** Teamwork, meetings, Speaking skills
- **Week 10:** Speaking in Public, Business Presentation skills

- **Week 11:** Public Relations- concept and significance
- **Week 12:** PR Tools- interpersonal, mass media and selective media, PR & Media Relations

**Facilitating the achievement of Course Learning Outcomes:**

<b>Unit.No</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning activity</b>	<b>Assessment tasks</b>
<b>1</b>	Understand and explain the elements of organizational communication	Presentation , discussions	Quiz, Discussions and debates
<b>2</b>	Communicate competently with credibility and confidence	Presentation and readings related to the topic	Open book test/quiz/term paper
<b>3</b>	Build relationship and specifically with your working group members	Presentation, discussion	Assignment, group discussion/quiz
<b>4</b>	Prepare and deliver effective presentations	Presentation,Select readings	Participation in discussion will be gauged,test, oration

## **SEMESTER III**

<b>SEMESTER III</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 10 DCECC301: Policy and Advocacy for Health and Environment	4			4
Core course 11 DCECC302: Extension Systems and Programme Evaluation	4			4
Core course 12 Integrated Practical DCECC303: Dialoguing Change II A. Programme Development & Evaluation B. Video for Development		4		
Core course 13 DCECC304: Internship		2		2
Core course 14 DCECC305: Technical Writing & Seminar		2		2
Total credits in core course	16			
Number of elective courses	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 1	4	2		6
Elective course 2	4	2		6
Total credits in elective courses	12			
<b>Total credits in Semester III      28</b>				

**Elective Courses for Semester III: Select any two of the following:-**

- DCEEC301: ICTD & Community Media
- DCEEC302: Advertising, Social Marketing and Media Advocacy
- DCEEC303: Development Journalism

# **POLICY AND ADVOCACY FOR HEALTH AND ENVIRONMENT THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

## **Course Objectives:**

To become aware of the policy framework and planning for health and environment. Also, gain insight into the principles and process of advocacy for health and environment for strategizing advocacy programmes.

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## **Course Learning outcomes:**

Student will be able to -

1. Enhanced awareness about the policy framework and planning for health and environment.
2. Exposure to different health legislations, policies and acts.
3. Exposure to different environment related policies, acts and conventions.
4. Understanding the process of advocacy and strategize advocacy for health and environment.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Policy and Planning: An Overview**

**12**

- Policy Framework and Accountability: An introduction
- Constitution of India and major amendments
- Five Year Plans of India
- Linkages between planning, policy and vulnerable groups and areas.
- Process of Policy Planning
- Lobbying and Networking for influencing Policy Planning
- Making Policy Planning participatory : Role of CSOs and NGOs
- Sustainable Development Goals : Mandate and Scope

### **UNIT II: Policy and Planning for Health**

**12**

- Understanding Health as a major goal
- Approaches for analyzing health problems -rights based approach.
- Health policy- historical perspective, present issues and trends. Nutrition and Food policies perspectives
- Legislations, government policies and programmes in promoting and protecting public health- laws and standards, NHM, State specific innovation schemes.
- Expenditure on Health
- International and national nutrition and health intervention programmes-. problems and challenges

### UNIT III: Policy and Planning for Environment

12

- Understanding Environment as a major goal
- Approaches for analyzing environment problems
- Environment policy framework- historical perspective, present issues and trends.
- Legislations, government policies and programmes in promoting and protecting environment- Environment Protection Act 1986, Air Act, Water Act, Climate Change Protocols and Conventions.
- Environment Protection and Management
- International and national environment intervention programmes-. problems and challenges

### UNIT IV: Advocacy for Health and Environment

12

- Advocacy – Concept, process, types, strategies and functions.
- Differences between advocacy and behaviour change communication
- C4D : Concept, Approaches and Trends
- Strategizing health/environmental advocacy and BCC campaigns- Elements, tools and techniques
- Networking, Lobbying and mobilizing pressure groups. Citizen action and people's participation in health/environmental movement and campaigns.
- Synergizing inter-sectoral partnerships for health/environmental advocacy and action

#### Suggested Readings:

- Bapat, J. (2005). *Development Projects and Critical Theory of Environment*. New Delhi: Sage Publications.
- Gadgil, M. & Guha, R. (1995). *Ecology and Equity*. New Delhi :, Penguin Books.
- Gardner, A. & Brindis, C. (2017). *Advocacy and Policy Change Evaluation: Theory and Practice*. USA: Stanford Business Books. ISBN-13: 978-0804792561
- Hoefler, R. (2015). *Advocacy Practice for Social Justice*. UK: Oxford University Press.
- Park, K. (2000). *Essential of Community Health*. Jaipur: M/s Banarsidas Bhanot.
- Srinivasan, K.; Valasoff, M. (2001). *Population Development Nexus in India*. New Delhi: Tata McGraw Hill Publishing Co Ltd.
- Unsicker, J. (2012). *Confronting Power: The Practice of Policy Advocacy*. USA : Kumarian Press.

#### Teaching Plan:

- **Week 1:** Policy Framework and Accountability: An introduction, Constitution of India and major amendments, Five Year Plans of India
- **Week 2:** Linkages between planning, policy and vulnerable groups and areas. Process of Policy Planning, Lobbying and Networking for Policy Planning
- **Week 3:** Making Policy Planning participatory : Role of CSOs and NGOs, Sustainable Development Goals : Mandate and Scope
- **Week 4:** Understanding Health as a major goal, Approaches for analyzing health problems - rights based approach.,

- **Week 5:** Health policy- historical perspective, present issues and trends. Nutrition and Food policies perspectives, Expenditure on Health
- **Week 6:** Legislations, government policies and programmes in promoting and protecting public health- laws and standards, NHM, State specific innovation schemes, International and national nutrition and health intervention programmes-. problems and challenges
- **Week 7:** Understanding Environment as a major goal, Approaches for analyzing environment problems, Environment policy framework- historical perspective, present issues and trends.
- **Week 8:** Legislations, government policies and programmes in promoting and protecting environment- Environment Protection Act 1986, Air Act, Water Act, Climate Change Protocols and Conventions.
- **Week 9:** Environment Protection and Management, International and national environment intervention programmes-. problems and challenges
- **Week 10:** Advocacy – Concept, process, types, strategies and functions, Differences between advocacy and behaviour change communication, C4D : Concept, Approaches and Trends
- **Week 11:** Strategizing health/environmental advocacy and BCC campaigns- Elements, tools and techniques
- **Week 12:** Networking, Lobbying and mobilizing pressure groups. Citizen action and people’s participation in health/environmental movement and campaigns.Synergizing inter-sectoral partnerships for health/environmental advocacy and action

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Enhanced awareness about the policy framework and planning for health and environment.	Presentation ,discussion	Participation in discussion ,review articles
2	Exposure to different health legislations, policies and acts.	Presentation, visit websites	Term paper, quiz/ analysis exercise
3	Exposure to different environment related policies, acts and conventions.	Presentation,videos , visit and study website of Ministry of Environment, Forest, & Climate Change, GoI.	Term paper, content analysis
4	Understanding the process of advocacy and strategize advocacy for health and environment.	Presentation,videos, discussions	Participation in discussion , test, review articles

## **EXTENSION SYSTEMS AND PROGRAMME EVALUATION THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To comprehend current extension systems and augment the skills for effective and efficient programme management . Also, to equip students with skills, knowledge and attitude necessary for effective and systematic monitoring and evaluation of programmes and projects.

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### **Course Learning Outcomes:**

Student will be able to -

1. Examine the national and international extension systems.
2. Integrate the aspects influencing design of development programmes.
3. Assess the relationship between the aspects and procedures involved in programme planning, monitoring and evaluation.
4. Develop skills for formulating M&E frameworks for programmes/projects.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Extension Systems and Development**

**12**

- Concept, Scope and evolution of extension
- Current paradigms of extension: national and international perspectives
- Characteristics and principles of adult learning
- Extension and Planned social change
- Extension and diffusion of technologies, Traditional and scientific knowledge systems ; women & sustainable development

### **UNIT II : Planning Development programmes**

**12**

- Types of plans, nature, characteristics,
- Programme Planning models, principles
- Theory of change, Program goals, objectives and indicators
- Steps in planning – problem analysis and need assessment, goal setting, strategizing Interventions, and programme logistics.
- Stakeholder participation; Networking and synergizing partnerships

### **UNIT III: Monitoring and implementation of development programmes**

**12**

- Meaning and concept of monitoring and evaluation
- Components, approaches and frameworks for monitoring and evaluation of development programme

- Programme implementation, strategies and approaches
- Feedback systems and role of Management Information Systems.

#### **UNIT IV: Programme evaluation**

**12**

- Scope, purpose and types of evaluation- Tools and techniques for conducting Evaluation, uses of evaluation
- Participatory Monitoring and Evaluation –scope, tools and methods
- Frameworks and indicators in evaluating sustainability, empowerment and impact on individuals' communities and institutions.
- Organizational dynamics and issues in evaluation
- Beneficiary and stakeholder's perspectives about evaluation.
- Report writing and documentation: data management techniques and methods and approaches for reporting, recording and documenting evaluations.

#### **Suggested Readings:**

- Cracknell, B.E. (2000) *Evaluating Development Aid-Issues Problems and Solutions*. New Delhi: Sage Publications.
- Kumar, S (2002) *Methods for Community Participation: A Complete Guide for Practitioners*. New Delhi: Vistaar Publications
- Kusek; Jody, Z; Ray, C (2004) *Ten Steps to a Results-Based Monitoring and Evaluation System: A Handbook for Development Practitioners*. World Bank
- Reidar, D. (2004) *Evaluating Development Programmes and Projects*. New Delhi: Sage Publications.
- Worthen, B.R.; Sanders, J.R.; Fitzpatrick, J.L. (1997) *Program Evaluation*. USA: Longman Publishers.
- Alex, G; Derek, B. (2000) *Monitoring and Evaluation for AKIS Projects: Framework and Options*. World Bank
- Mikkelsen, C. (1995) *Methods for Development Work and Research*. New Delhi: Sage Publications.
- International Planned Parenthood (IPPF). 2009. *Putting the IPPF Monitoring and Evaluation Policy into Practice: A Handbook on Collecting, Analyzing and Utilizing Data for Improved Performance*. London, UK.
- Markiewicz, A. (2015). *Developing Monitoring and Evaluation Frameworks* New Delhi: Sage Publications.
- Saunders, R.P. (2015). *Implementation Monitoring and Process Evaluation* New Delhi: Sage Publications.

#### **Teaching Plan:**

- **Week 1:** Concept, Scope and evolution of extension, approaches -current paradigms of extension: national and international perspectives,
- **Week 2:** Relationship of Extension and Development – Development programmes and Initiatives, characteristics and principles of adult learning psycho-social aspects,

- **Week 3:** extension and planned social change role of extension in diffusion ,diffusion of technologies, confluence of knowledge systems, women & sustainable development
- **Week 4:** Philosophy, scope, principles of programme planning, Programme Planning Types, Models, Principles
- **Week 5:** Steps in planning – problem analysis and need assessment, strategizing interventions, goal setting and establishing indicators.
- **Week 6:** Stakeholder analysis, participation, impact on programme design and management, networking and synergizing partnerships for development programmes
- **Week 7:** Meaning and concept of monitoring and evaluation, components, approaches and frameworks for monitoring and evaluation of development programme
- **Week 8:** Theory of change and M&E systems, programme implementation, strategies and approaches, problems and influencing factors
- **Week 9:** Feedback systems and role of Management Information Systems, Scope, purpose and types of evaluation- Tools and techniques for conducting evaluation, uses of evaluation,
- **Week 10:** Participatory Monitoring and Evaluation –scope, tools and methods. Issues in evaluation- organizational dynamics, client orientations, mechanisms of feedback and the role of MIS.
- **Week 11:** Beneficiary and stakeholder’s perspectives about evaluation, frameworks and indicators in evaluating sustainability, empowerment and impact of development change on individuals’ communities and institutions.
- **Week 12:** Report writing and documentation: data management techniques and methods, procedures and approaches for reporting, recording and documenting evaluations.

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Examine the national and international extension systems.	Classroom discussions, presentation ,videos	Review of journal articles,review case studies
2	Integrate the aspects influencing design of development programmes.	Classroom discussions,presentation	Term paper ,review of journal articles
3	Assess the relationship between the aspects and procedures involved in programme planning, monitoring and evaluation.	Classroom discussions, presentation ,videos	Participation in group discussion will be gauged,review of case studies
4	Develop skills for formulating M&E frameworks for programmes/projects.	Discussion on select readings ,presentation	Participation in group discussion,analysis of M&E frameworks

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**DIALOGUING CHANGE II  
INTEGRATED PRACTICAL**

**Marks : 100**

**Duration: 6 Hrs.**

**Course Objectives:**

To augment the programme monitoring and evaluation skills for effective and efficient programme implementation and develop an understanding of the radio production process: research, planning, and production.

**Course Learning Outcomes:**

Student will be able to -

1. Integrate the aspects influencing design of development programmes.
2. Assess the relationship between the aspects and procedures involved in programme planning, monitoring and evaluation.
3. Develop an understanding of the video production process: research, planning, and production.
4. Build up writing skills for documentaries, news broadcasts, and other video broadcasts.

**CONTENTS**

**PERIODS**

**PART A: PROGRAMME DEVELOPMENT AND EVALUATION**

**UNIT I**

**12**

- Design, implement and evaluate intervention programmes for different target
- groups of urban and rural communities.
- Impact monitoring & evaluation using different evaluation frameworks
- Innovative techniques in M&E

**UNIT II**

**12**

- Prepare project proposals for- process documentation, monitoring and evaluation reports for development programmes.

**PART B: VIDEO PRODUCTION**

**UNIT III**

**12**

- Analysis of Television programs and films
- A look at film-styles, genres: Dramatic, narrative lyrical, aesthetic, ritual, ideological.

- A discussion of film-psychology, and other aspects of the perception of films.
- Narrative analysis- Micro and macro analysis of structure, Reading the film, Deconstruction, Literary analysis

#### UNIT IV

12

- Video production – An introduction to program production equipments, techniques, production interviews, talks, discussions, features, documentaries.
- Research and planning: Writing and Scripting for news, broadcast, programs and documentaries - style, language and skills
- Production: Explore various concept and direction styles ranging from scripted narrative and documentary movie-making traditions.
- Develop EFP/documentary/ENG short films on different social issues focusing
- Post Production: editing

#### Suggested Readings:

- Chambers, R. (1992) *Rural Appraisal: Rapid Relaxed and Participatory*. Sussex
- Markiewicz, A. (2015). *Developing Monitoring and Evaluation Frameworks* New Delhi: Sage Publications.
- Mikkelsen, C. (1995) *Methods for Development Work and Research*. New Delhi: Sage Publications.
- Mukherjee, N. & Jena, B. (2001) *Learning to Share- Experiences and Reflections on PRA and Other Participatory Approaches (Vol 2)*. New Delhi: Concept Publishing House.
- Saunders, R.P. (2015). *Implementation Monitoring and Process Evaluation* New Delhi: Sage Publications.
- Wales, L. (2005). *People and Process of Film and Video Production: From Low Budget to High Budget*. Boston: Allyn and Bacon
- White, S. (2004). *Participatory Video-Images that Transform and Empower*. New Delhi: Sage Publications
- White, T. (2000). *Broadcast News Writing, Reporting and Producing*. London and New York: Focal Press.

### INTERNSHIP

#### Course Objectives:

To gain hands-on experience of working in various settings linked with issues in Development Communication and Extension.

#### Course Learning outcomes:

Student will be able to -

1. Get hands on experience of real field setting.
2. Understanding of the issues and strategies organizations work on.
3. Opportunity to use communication skills for personal and professional development.
4. Enhanced ability to work with groups and use managerial and problem solving skills.

**Description:**

The student will be required to undergo a field placement for a total duration of 4-6 weeks in their chosen area of interest after the Semester II and prior to Semester III. Depending on the interest of the students the setting may be a Social marketing agency, Media production house, NGO, international agency, corporate involved in development programmes, government department in their on-going community programmes. Institutions/organizations chosen should be of good professional standing. The student must participate in the on-going activities of the agency/ establishment, acquire skills and knowledge, gather information and prepare a report to be presented in the department after the completion of the placement period.

**TECHNICAL WRITING & SEMINAR  
PRACTICAL****Marks : 50****Duration: 3 Hrs.****Course Objectives:**

To understand the nuances of scientific writing and develop skills in collation and presentation of scientific information along with learning the process of developing a research proposal/ project proposal

**Course Learning Outcomes:**

Student will be able to -

1. Demonstrate knowledge of scientific writing method and styles
2. Develop a research design on a topic relevant to their field
3. Prepare a systematic literature review on a select topic
4. Present a seminar of the literature review

The practical will have three components. Based on option of students for either dissertation or project work, due emphasis will be provided

- |                                                                                                                                                                                                                                                                                         |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>A) Research design / Project proposal</b>                                                                                                                                                                                                                                            | <b>12</b> |
| <ul style="list-style-type: none"><li>• Under the guidance of supervisor allocated prepare a research design / project proposal</li></ul>                                                                                                                                               |           |
| <b>B) Skills in Technical Writing</b>                                                                                                                                                                                                                                                   | <b>24</b> |
| <ul style="list-style-type: none"><li>• Learn the nuances of select technical writing styles/ guides</li><li>• Analyze technical posters of researches in the fields</li><li>• Analyze dissertations, research reports and project evaluation reports and their presentations</li></ul> |           |
| <b>C) Review of Literature &amp; Seminar</b>                                                                                                                                                                                                                                            | <b>12</b> |
| <ul style="list-style-type: none"><li>• Prepare a literature review on a select topic using an approved style guide</li></ul>                                                                                                                                                           |           |

- Conduct Plagiarism check of document prepared
- Present an oral seminar on the topic

### Suggested Readings:

- Alley, M. (2018) *The Craft of Scientific Writing*. New York: Springer.
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.
- Blum, D., Knudson M., and Henig, R. M. (2005) *Field Guide for Science Writers: The Official Guide of the National Association of Science Writers*. USA; Oxford University Press.  
<http://www.nasw.org/field-guide>
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Katz, M. (2009) *From Research to Manuscript: A Guide to Scientific Writing (2<sup>nd</sup> Ed)*. New York : Springer
- <http://www.apastyle.org/>
- <http://www.citethisforme.com/guides>

### Facilitating the achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	<b>Week 1 2 &amp; 3</b> Demonstrate knowledge of scientific writing method and styles	Students oriented the nuances of select technical writing styles/ guides Analyze technical posters of researches in the fields Analyze dissertations, research reports and project evaluation reports Videos on scientific writing shown	Quiz and exercises will be given to students
2	<b>Week 3 4 5 6 7 &amp; 8</b> Develop a research design on a topic relevant to their field	Along with allocated supervisors students will work on deciding a topic of research, review	Students submit the research design to technical review board for review and comments

		literature and develop an appropriate research design	
3.	<b>Week 9&amp; 10</b> Prepare a systematic literature review on a select topic	Students collate the literature review done about their research topic selected and prepare a document based on it.  Students review old seminar documents and critique their presentation	Students literature review document reviewed by seminar committee  Plagiarism test done of final document
3.	<b>Week 11&amp; 12</b> Present a Seminar based on the literature review done	Students watch videos of seminar presentations and critique them.  Prepare a seminar presentation of	Students presentations evaluated by the departmental seminar committee

## **INFORMATION, COMMUNICATION & TECHNOLOGY FOR THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To enhance the conceptual understanding of paradigm shift in society in the context of the emergence of Information and Communication Technology (ICT).

### **Course Learning Outcomes:**

Student will be able to -

1. Enhanced understanding of ICTs and the impact of digitilization and challenges associated with ICTs
2. Exposure to concept of Networked societies through theories and perspectives
3. Understand the forms and potential of various community media.
4. Appraise the convergence between ICTs and community media for development.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Introduction**

**12**

- Second Communication Revolution, Digitilization, Cultural globalization and ICTs
- Political economy of communication revolution : Markets, hierarchies and networks, New economy.
- Law & Policy, Surveillance, Rights and Privacy
- Reach, access and skills in ICTs
- Disparities and Divides: Digital Divide, Global and National Scenario, Gender and regional difference
- Perspectives and theories: Technology as Amplifier, Transfer and Diffusion of Technology, Embeddedness of Technology : Progressive/Disruptive Transformation

### **UNIT II: Networked Societies**

**12**

- Networks : evolution and classification, level of networks, Mass to network society
- Technology and networked society : Telecom Network, Data Communication Network, Mass Communication Network, Integrated Network,Multi media and broadband network.
- Concept and characteristics of Networked Societies
- Social Structure, Space, Time : Communities and Social Relations
- Theories and Perspectives about Networked Societies
- Digital Culture : Human personality and new media, Perception, cognition and learning with new media, Quality and Quantity of New Media Content

### **UNIT III: Community media as alternative media**

**12**

- Concept and characteristics of community media
- Metaphors of Community Media: Alternative media, citizen's media, radical media, people's media.
- Social psychology of community media
- Community media policy : Growth, national and international perspectives
- Traditional media and performing arts as community media
- Alternative Print media: characteristics, strengths and weakness with examples;
- Alternative Television with special focus on PUBLIC Access Television;
- Alternative Radio, Community Radio;
- Internet Virtual Communities, blogging and microblogging.
- Sustainability issues of Community Media organizations

### **UNIT IV: ICTs and Community Media: Convergence for Development**

**12**

- Technology and culture: community and identity; participatory culture and ICT, community informatics.
- Computer Mediated Communication and development: Types, Importance and Relevance
- ICT enabled community media and social change

- Radio, Television, Print Media, New Media and Mobile Telephony as an ICT tool for development
- Social Networking Sites, Multimedia platforms, convergence and Interactivity
- Scope, nature and types of convergent journalism for Development

### Suggested Readings:

- Buckingham, D. (2008) *Youth, Identity, and Digital Media. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning*. Cambridge, MA: The MIT Press.
- Hassan, R. & Thomas, J. (2006). *The New Media Theory*. Open University Press.
- Hassan, R. (2004). *Media, Politics and the Network Society*. Open University Press.
- Jenkins, H. (2006). *Convergence Culture: Where Old and New Media Collide*. New York, London: New York University Press.
- Kukkonen, H.O. & Kukkonen, H.O. (2015). *Humanizing the Web: Change and Social Innovation (Technology, Work and Globalization)*. New Delhi: Palgrave Macmillan.
- Marshall, P. D. (2004). *New Media Cultures, Information and Communication Technology for Development*. Hodder Stoughton Educational.
- Pannu, P. & Tomar, Y. (2012). *Communication, Technology for Development*. New Delhi : IK International Publishing House. ISBN : 9789380578903.
- Preston, P. (2001). *Reshaping Communication: Technology, Information and Social Change*. London, California, New Delhi : Sage Publications. DOI: <http://dx.doi.org/10.4135/9781446222164>
- Vanaja, M. & Rajasekar, S. (2016). *Information & Communication Technology (ICT) In Education*. New Delhi: Neelkamal Publications.
- Warschauer, M. (2004). *Technology and Social Inclusion: Rethinking the Digital Divide*. MIT Press (MA).

### Teaching Plan:

- **Week 1:** Second Communication Revolution, Digitilization, Cultural globalization and ICTs, Political economy of communication revolution : Markets, hierarchies and networks, New economy.
- **Week 2:** Reach, access and skills in ICTs  
Disparities and Divides: Digital Divide, Global and National Scenario, Gender and regional difference
- **Week 3:** Law & Policy, Surveillance, Rights and Privacy, Perspectives and theories: Technology as Amplifier, Transfer and Diffusion of Technology, Embeddedness of Technology : Progressive/Disruptive Transformation
- **Week 4:** Networks : evolution and classification, level of networks, Mass to network society, Concept and characteristics of Networked Societies
- **Week 5:** Technology and networked society : Telecom Network, Data Communication Network, Mass Communication Network, Integrated Network, Multi media and broadband network, Social Structure, Space, Time : Communities and Social Relations

- **Week 6:** Theories and Perspectives about Networked Societies, Digital Culture : Human personality and new media, Perception, cognition and learning with new media, Quality and Quantity of New Media Content
- **Week 7:** Concept and characteristics of community media, Metaphors of Community Media: Alternative media, citizen’s media, radical media, people’s media, Social psychology of community media
- **Week 8:** Community media policy : Growth, national and international perspectives
- Traditional media and performing arts as community media, Sustainability issues of Community Media organizations
- **Week 9:** Alternative Print media: characteristics, strengths and weakness with examples; Alternative Television with special focus on PUBLIC Access Television; Alternative Radio, Community Radio; Internet Virtual Communities, blogging and microblogging.
- **Week 10:** Technology and culture: community and identity; participatory culture and ICT, community informatics, Computer Mediated Communication and development: Types, Importance and Relevance
- **Week 11:** ICT enabled community media social change  
Radio, Television, Print Media, New Media and Mobile Telephony as an ICT tool for development
- **Week 12:** Social Networking Sites; Multimedia platforms, convergence and Interactivity, Scope, nature and types of convergent journalism for Development

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Enhanced understanding of ICTs and the impact of digitization and challenges associated with ICTs	Presentation ,discussions on ,videos	Participation in discussion,secondary review
2	Exposure to concept of Networked societies through theories and perspectives	Presentation,readings related to the topic will be shared	Presentation on theories and perspectives of Networked Society, Quiz
3	Understand the forms and potential of various community media.	Presentation,videos related to different community media and their potential,success stories of community media	Identify and present success stories of different community media
4	Appraise the convergence between ICTs and community	Presentation ,discussions on ,videos , special lecture by expert in the field	Participation in Debate on new media v/s community media, test

	media for development.		
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## INFORMATION, COMMUNICATION & TECHNOLOGY FOR DEVELOPMENT AND COMMUNITY MEDIA

### PRACTICAL

**Marks : 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To gain a practical understanding of the potential of ICTs and community media for development.

**Course Learning outcomes:**

Student will be able to -

1. Enhanced understanding of ICTs and its functioning
2. Developing ICT enabled media.
3. Appreciate the potential of various community media.
4. Application of communication principles for content development of community media.

**CONTENTS**

**PERIODS**

**UNIT 1**

**12**

- ICTs- Definition, evolution, classification, reach, access and skills in ICTs
- Disparities and Divides: Digital Divide, Concept, dimensions (Global and Indian Scenario), Gender and regional difference
- Perspectives of ICTs : Technology as Amplifier
- Transfer and Diffusion of Technology
- Embeddedness of Technology : Progressive/Disruptive Transformation

**UNIT II**

**12**

- Networks : evolution and classification, level of networks, Mass to network society
- Technology and networked society : Telecom Network, Data Communication Network, Mass Communication Network, Integrated Network, Multi media and broadband network.
- Digital Culture : Human personality and new media, Perception, cognition and learning with new media, Quality and Quantity of New Media Content
- Internet Virtual Communities with special focus on blogging and microblogging.
- Social Networking Site; Convergent media, Multimedia platforms, convergence and Interactivity
- Poverty Porn & ICTs
- Developing ICT enabled media.

### UNIT III

12

- Traditional media and performing arts as community media
- Alternative Print media: Content Analysis & Appraisal
- Alternative Television with special focus on PUBLIC Access Television : Content Analysis & Appraisal
- Alternative Radio, Community Radio : Content Analysis & Appraisal

### UNIT IV

12

- Content Developmet of Community Media with respect to :
  - Communication Principles
  - Socio-economic context
  - Message design
  - Channel Selection
  - Audeince targeting and segmentation
  - Developing Feedback mechanism

#### Suggested Readings:

- Hassan, R. & Thomas, J. (2006). *The New Media Theory*. Open University Press.
- Hassan, R. (2004). *Media, Politics and the Network Society*. Open University Press.
- Jenkins, H. (2006). *Convergence Culture: Where Old and New Media Collide*. New York, London: New York University Press.
- Marshall, P. D. (2004). *New Media Cultures, Information and Communication Technology for Development*. Hodder Stoughton Educational.
- Pannu, P. & Tomar, Y. (2012). *Communication, Technology for Development*. New Delhi : IK International Publishing House. ISBN : 9789380578903.
- Preston, P. (2001). *Reshaping Communication: Technology, Information and Social Change*. London, California, New Delhi : Sage Publications. DOI: <http://dx.doi.org/10.4135/9781446222164>
- Vanaja, M. & Rajasekar, S. (2016). *Information & Communication Technology (ICT) In Education*. New Delhi: Neelkamal Publications. ISBN-13: 978-8183165198
- Warschauer, M. (2004). *Technology and Social Inclusion: Rethinking the Digital Divide*. MA : MIT Press (MA).

## ADVERTISING, SOCIAL MARKETING AND MEDIA ADVOCACY

### THEORY

Marks : 100

Duration: 3 Hrs.

#### Course Objectives:

To develop a holistic understanding about the concepts of advertising, social marketing and media advocacy

**Course Learning Outcomes:**

Student will be able to -

1. Enhanced understanding of the key dimensions of Advertising, social marketing, marketing strategies in relation to media advocacy
2. Expansion of the steps involved in the media planning and its approaches
3. Understand the key principles of social media advocacy
4. Strategic use of advertising and social media in today's time

**CONTENTS****PERIODS****UNIT I: Communication Research and Media Planning****12**

- Media Literacy- concepts and scope
- Audience research- researching media usage and exposure; affective, cognitive and behavioral response to media
- Media planning- concept, evolution, national and international trends
- Approaches and theories of media planning
- Communication Research & planning- importance, relevance in selection of media
- Steps involved in media planning- external and internal factors
- Selection of media, Message design- treatment, presentation, structuring and scheduling of media

**UNIT 2: Advertising****12**

- Advertising: definition, types, origin, growth & development of advertising in India
- Publicity, propaganda, advertising and Social Marketing
- Nature, role and impact of Advertising on society
- Theories and Principles of Advertisements
- Function of Advertising in communication campaigns , marketing and public relations
- Planning Advertising campaigns- methods and strategies: Budgets and policy
- Factors influencing designing of an advertising campaign.

**UNIT 3: Social Marketing, Marketing Research and Behavior Change****12**

- Social Marketing: concept, evolution, differences from commercial marketing
- heories and Principles of Social Marketing
- Planning Social Marketing campaigns- analyzing external and internal environment, establishing goals and target audiences
- Social marketing strategies and approaches
- Managing social marketing programs
- Assessment and evaluation of the Social Marketing effort

**UNIT 4: Media advocacy****12**

- Mainstream Media, Community Media and Social Change
- Social Marketing, Market Research And Behavior Change
- Activism in Mainstream Media VS Activism in Community Media
- Techniques of media advocacy
- Design and evaluation of Social Marketing and Media Advocacy initiatives
- Ethics of Media Advocacy

### **Suggested Readings:**

- Belch, G.E & Belch, M.A.. (2014). *Advertising and Promotion: An Integrated Marketing Communications Perspective, 10th Edition*. McGraw-Hill.
- Howley, K. Thousand Oaks, Ed (2010). *Understanding Community Media.*, CA: Sage Publications.
- Kotler, P.; Roberto E. L. (1989). *Social Marketing strategy for Changing Public Behaviour*. New York: The Free Press, Mac Millan Inc.
- Kotler, Ph., Lee, N. (2011). *Social Marketing: Influencing Behaviors for Good* . London, California : Sage Publications
- Mody, B. (1991) *Designing Messages for Development Communication*. New Delhi: Sage Publications.
- Narula, A. (2003). *Implementing Advertising Strategy*. New Delhi: Merx Equity printers.
- Seymer, F. H. (1999). *Social Marketing: Promoting the Cause of Public and Non-Profit Agencies*. Westing MA: Siman & Schuslar Inc.
- Shah, K.& D'Souza, A. (2009). *Advertising and Promotions: an IMC perspective*. New Delhi: Tata McGraw Hill.
- Singhal, A. ; Rogers, E. (2001) *India's Communication Revolution-From Bullock Carts to Cyber Marts*. New Delhi: Sage Publications.
- Zimmerman, J. & Deborah, N. G. (2017).*Social Media Marketing All-in-One For Dummies*. USA: For Dummies.

### **Teaching Plan:**

- **Week 1:** Media Literacy- concepts and scope, Audience research- researching media usage and exposure; affective, cognitive and behavioral response to media
- **Week 2:** Audience research- researching media usage and exposure; affective, cognitive and behavioral response to media
- **Week 3:** Media planning- concept, evolution, national and international trends, Approaches and theories of media planning, Communication Research & planning- importance, relevance in selection of media
- **Week 4:** Steps involved in media planning- external and internal factors, Selection of media, Message design- treatment, presentation, structuring and scheduling of media
- **Week 5:** Advertising: definition, types, origin, growth & development of advertising in India, Publicity, propaganda, advertising and & Social Marketing
- **Week 6:** Nature, role and impact of Advertising on society, Theories and Principles of Advertisements

- **Week 7:** Function of Advertising in communication campaigns , marketing and public relations, Planning Advertising campaigns- methods and strategies: Budgets and policy, Factors influencing designing of an advertising campaign.
- **Week 8:** Social Marketing: concept, evolution, differences from commercial marketing, Theories and Principles of Social Marketing
- **Week 9:** Planning Social Marketing campaigns – analyzing external and internal environment, establishing goals and target audiences
- **Week 10:** Social marketing strategies and approaches
- **Week 11:** Managing social marketing programs
- **Week 12:** Assessment and evaluation of the Social Marketing effort

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Enhanced understanding of the key dimensions of Advertising, social marketing, marketing strategies in relation to media advocacy	Presentation ,discussions on ,videos	Quiz, content analysis
2	Expansion of the steps involved in the media planning and its approaches	Presentation ,discussions on ,videos	Create presentation, test
3	Understand the key principles of social media advocacy	Presentation, discussions on, videos	Content analysis, term paper/open book test
4	Strategic use of advertising and social media in today's time	Presentation, selected readings, discussion	Participation in discussion will be gauged, powerpoint presentation/test

**ADVERTISING, SOCIAL MARKETING AND MEDIA ADVOCACY  
PRACTICAL**

**Marks : 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To develop a holistic understanding about the concepts of advertising, social marketing and media advocacy

**Course Learning Outcomes :**

Student will be able to -

1. Analysis of the Issues covered in the media
2. Create a social media advocacy strategy
3. Plan for a sustained social media advocacy program
4. Benchmark the success of a social media advocacy program

**CONTENTS**

**PERIODS**

**UNIT 1: Analysis of the Issues**

**12**

- Select a global issue such as climate change and compare and contrast the way it is presented by the media in India and two other nations globally.

**UNIT II: Recruiting social advocates**

**12**

- Who – Identifying the key groups of social advocates
- Where – Locating your social advocates
- What – Considering key issues when recruiting social advocates
- How – Starting the social advocacy program

**UNIT III: Sustaining Social Media advocacy program**

**12**

- Resources needed to start and sustain a program
- Results to quantify the returns of the program
- Review the results for improvement

**UNIT IV: Design and Production**

**12**

- Design and evaluation of social marketing and media advocacy initiatives
- Production of a documentary video for social change

**Suggested Readings:**

- Kotler, P.; Roberto E. L. (1989) *Social Marketing strategy for Changing Public Behaviour*. New York: The Free Press, Mac Millan Inc.
- Mody, B. (1991) *Designing Messages for Development Communication*. New Delhi: Sage Publications.
- Mody, B. (1991) *Designing Messages for Development Communication*. New Delhi: Sage Publications.
- Narula, A. (2003). *Implementing Advertising Strategy*. New Delhi: Merx Equity printers.
- Shah, K.; D'Souza, A. (2009). *Advertising and Promotions: an IMC perspective*. New Delhi: Tata McGraw Hill.

- Zimmerman, J. & Deborah, N. G. (2017). *Social Media Marketing All-in-One For Dummies*. USA: For Dummies.

## **DEVELOPMENT JOURNALISM THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To understand the concept of development journalism in the context of social change in India and build an interface of different elements of media, society and development.

### **Course Learning Outcomes :**

Student will be able to -

1. Understand of the concept, scope of development journalism
2. Initiate a dialogue and debate on issues concerning the developing world and delineate the role of media
3. Familiarize the participants with the linkages between development, media and communication
4. Foster the spirit of regional cooperation, international understanding and goodwill through exchange of knowledge and experience in the field of development communication.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Development Journalism**

**12**

- Introduction to mainstream Journalism
- Difference between mainstream journalism and Development Journalism
- Role of Development Communication in People's Governance of Accountability
- Concept of Citizen Journalism and role of Development professionals in promoting its use
- Development Journalism – Role and Status in India
- Sources of news– role of news agencies- national and international perspectives
- Democratisation of news Flow – History, Debate, NWICO

### **UNIT II : Elements of Media**

**12**

- Print Media – Historical Genesis to present – Contribution to development. A critique
- Role of Radio in Development, Global and Indian Perspective: History to present
- Role of TV in Development, Global and Indian Perspective: History (SITE )to present
- Community Media for Development
- Role of Community Radio: Methods, Approaches, Participation and Issues of Development
- Traditional Media (Puppetry, Folk Song and Folk love, Grassroots Comics)
- Modern (New) Media, Traditional v/s Modern Media
- Digital Media and Development Communication

- Entertainment Education
- ICT based Development Communication Experiments

### **UNIT III: Media and the Ethics**

**12**

- Freedom of Media – Concept, case studies (with a special focus on Indian experience), critique and challenges
- Media Laws – History, practice
- Media Ethics – Concept and Principles, Dilemmas/Concerns, Regulation, Impact and Critique
- Media Management: Ownership patterns, regulation
- Media Regulation: Concept, Issues and Challenges

### **UNIT IV: Development Reporting and Issues in Development**

**12**

- Development reporting in India- Concept, scenario
- Trends in Development Reporting
- Sociology of news in Media: factors affecting news treatment, paid news, agenda setting, pressures in the newsroom, trial by media, gatekeepers.
- Issues of development in Media- Process of National Economic development and Globalization, International Financial and monetary institutions, Bilateral, regional and multilateral trade agreements, Infrastructure, Economic Indicators, Investment Flows, National Budget and Finance, Stock and Commodity Markets

#### **Suggested Readings:**

- Burns, L.S. (2002). *Understanding Journalism*. New Delhi: Sage Publications.
- Franklin, B. (2017). *The Future of Journalism: Developments and Debates (Journalism Studies)*. London: Routledge.
- Kumar, K. J. (2000). *Mass communication in India*. New Delhi: Jaico Publishing House.
- McQuail, D. (2010). *Mass Communication Theory*. London : Sage Publications.
- Murthy, D V R. (2007) : *Development Journalism, What Next?* New Delhi : Kanishka Publications.
- Narula, U. (1994). *Development Communication : Theory & Practice*. Delhi: Haranand Publications.
- Ninan, S. (2007). *Headlines from the heartland: Reinventing the Hindi public sphere*. New Delhi : SAGE Publications.
- Ocando, J.L. & Nguyen, A. (2017). *Developing News: Global journalism and the coverage of Third World development* . London: Routledge. ISBN-13: 978-0415621823
- Servaes, J. (2008). *Communication for development and social change*. New Delhi: Sage Publications.

#### **Teaching Plan:**

- **Week 1:** What makes main stream Journalism?, Difference between mainstream journalism and Development Journalism?, Role of Development Communication in People's Governance of Accountability
- **Week 2:** Concept of Citizen Journalism and role of Development professionals in promoting

its use Development Journalism – Role and Status in India, Sources of news– role of news agencies- national and international perspectives

- **Week 3:** Democratisation of news Flow – History, Debate, NWICO, Print Media – Historical Genesis to present – Contribution to development. A critique
- **Week 4:** Role of Radio in Development, Global and Indian Perspective: History to present, Role of TV in Development, Global and Indian Perspective: History (SITE )to present, Community Media for Development
- **Week 5:** Role of Community Radio: Methods, Approaches, Participation and Issues of Development, Traditional Media (Puppetry, Folk Song and Folk love, Grassroots Comics), Modern (New) Media, Traditional v/s Modern Media
- **Week 6:** Digital Media and Development Communication, Entertainment Education, ICT based Development Communication Experiments
- **Week 7:** Freedom of Media – Concept, case studies (with a special focus on Indian experience), critique and challenges, Media Laws – History, practice
- **Week 8:** Media Ethics – Concept and Principles, Dilemmas/Concerns, Regulation, Impact and Critique, Media Management: Ownership patterns, regulation
- **Week 9:** Media Regulation: Concept, Issues and Challenges
- **Week 10:** Development reporting in India- Concept, scenario, Trends in Development Reporting
- **Week 11:** Sociology of news in Media: factors affecting news treatment, paid news, agenda setting, pressures in the newsroom, trial by media, gatekeepers.
- **Week 12:** Issues of development in Media- Process of National Economic development and Globalization, International Financial and monetary institutions, Bilateral, regional and multilateral trade agreements, Infrastructure, Economic Indicators, Investment Flows, National Budget and Finance, Stock and Commodity Markets

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Understand of the concept, scope of development journalism	Presentation ,videos	Quiz, group discussion
2	Initiate a dialogue and debate on issues concerning the developing world and delineate the role of media	Presentation ,discussions on ,videos	Content analysis ,open book test/test/assignment
3	Familiarize the participants with the linkages between	Presentation ,discussions on ,videos	Term paper, content analysis

	development, media and communication		
4	Foster the spirit of regional cooperation, international understanding and goodwill through exchange of knowledge and experience in the field of development communication.	Presentation,selected readings ,discussion	Students participation in discussion will be gauged, content analysis

**DEVELOPMENT JOURNALISM  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the concept of Development Journalism in the context of social change in India and build an interface of different elements of media, society and development.

**Course Learning Outcomes :**

Student will be able to-

1. Analyze media's reportage on development issues in India
2. Initiate a dialogue and debate on issues concerning the developing world and delineate the role of media
3. Build skills for Writing for Media
4. Ability to produce and develop media in today's society

**CONTENTS**

**PERIODS**

**UNIT I**

**24**

- Critical analysis of mainstream media's reportage on development issues in India
- Analysis of mainstream TV News media's reportage on rural problems and issues in India
- A comparative analysis of a Community Radio station and any of AIR's Local Radio stations.

**UNIT II**

**24**

- Writing for Media- Exercises on editing copies, writing headlines, writing features, structuring a dummy editorial page, writing editorials

- Production of Newspaper- Principles of Layout and Design: Layout and format, Typography, Copy preparation ; Design process-size, anatomy, grid, design ; Handling text matter-headlines, reports, pictures, advertisements ; Page make-up - Print and Electronic copy, Front page, Editorial page and Supplements

**Suggested Readings:**

- Burns, L.S. (2002). *Understanding Journalism*. New Delhi: Sage Publications.
- Franklin, B. (2017). *The Future of Journalism: Developments and Debates (Journalism Studies)*. London: Routledge. ISBN-13: 978-1138085701.
- Kumar, K. J. (2000). *Mass communication in India*. New Delhi: Jaico Publishing House.
- McQuail, D. (2010). *Mass Communication Theory*. London : Sage Publications.
- Murthy, D V R. (2007) : *Development Journalism, What Next?* New Delhi : Kanishka Publications.
- Narula, U. (1994). *Development Communication : Theory & Practice*. Delhi: Haranand Publications.
- Ninan, S. (2007). *Headlines from the heartland: Reinventing the Hindi public sphere*. New Delhi : SAGE Publications.
- Ocando, J.L. & Nguyen, A. (2017). *Developing News: Global journalism and the coverage of Third World development* . London: Routledge.
- Servaes, J. (2008). *Communication for development and social change*. New Delhi: Sage Publications.

## **SEMESTER IV**

<b>Semester IV</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 15 DCECC401: Dissertation/Experiential Learning Project		4		4
Total credits in core course	4			
Number of elective courses	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 3	4	2		6
Elective course 4	4	2		6
Elective course 5	4	2		6
Total credits in elective courses	18			
<b>Total credits in Semester IV</b>	<b>22</b>			

Elective Courses: Select any three of the following:-

- DCEEC401: SBCC III – Health and Well Being
- DCEEC402: SBCC III – Sustainable Development and Climate change
- DCEEC403: SBCC III – Consumption and Public Policy
- DCEEC404: SBCC III – Peace and Human Rights
- DCEEC405: Evaluation of Development Programmes & Policies
- DCEEC406: Corporate Social Responsibility and Fundraising
- DCEEC407: Urban Governance and Civil Society
- DCEEC408: Lifelong Learning, Lifeskills and Development
- DCEEC409: Knowledge Management & Digital Marketing
- DCEEC410: Corporate Communication and Public Relations
- DCEEC411: Livelihood Systems & Social Entrepreneurship

## **DISSERTATION/ PROJECT WORK**

### **Course Objectives:**

To develop skills in conducting a research study/ working in a project and learn the process of writing a dissertation/ project report

### **Course Learning Outcomes:**

Student will be able to -

1. Know the practical aspects of, collecting data/ project work
2. Evaluate, select and use appropriate strategies for reduction, analysis and presentation of data collected during research process/ project work
3. Suitably illustrate data/ insights using various graphical and other methods.
4. Prepare a dissertation document/ project report based on research process/ project work done.

Students will be given an option of doing either

A) Dissertation or B) Project work in a chosen area congruent to their discipline/ field of study.

The work will be an original effort.

## **SOCIAL AND BEHAVIOR CHANGE COMMUNICATION: HEALTH & WELL BEING**

### **THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To develop a holistic understanding of sociology of health and appreciate SBCC interventions in the area of health.

### **Course Learning outcomes:**

Student will be able to -

1. Enhanced understanding of the multi-faceted nature of community health
2. Develop a holistic understanding of sociology of health and people's perception towards health.
3. Critique policies, intervention programmes, and strategies adopted for addressing community health issues.
4. Gain an insight into SBCC interventions and techniques in the area of health.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Health –Development Perspectives**

**12**

- Intrinsic linkage between health and development.
- Health situation, concept of community health, epidemiology, demography, preventive

and promotive health.

- Socio cultural perceptions and motivations towards health, Social Determinants of health
- Hierarchy of Indian Public Health System
- Health care systems- types-contemporary and traditional systems, socio-cultural context of health care and delivery systems, communitization of health
- Health Economics- Expenditure on public health- concept, public, private, and social funding. Demand versus need, future challenges.

## **UNIT II: Community Health Issues**

**12**

- Health care issues across life cycle- children, adolescents, men, women and the elderly- national and international perspectives.
- Nutritional problems and their implications, Food and nutritional security
- Reproductive and Child Health (RCH) –maternal and child mortality status. Traditional and contemporary RCH practices and issues
- Communicable and Non-communicable diseases
- Social Health issues- Drugs Tobacco, alcohol- prevalence prevention and rehabilitation
- Environment and health- Pollution, toxicity, quality, contaminations, residues and adulteration issues –prevalence, health implications.
- Health issues during disaster and emergencies and special circumstances- assessment and surveillance of affected groups, relief and rehabilitation strategies.

## **UNIT III- Innovations in Health Communication**

**12**

- Health communication : Indian and Global Perspectives
- Innovative Approaches in Health Communication
- Entertainment Education
- Campaigns
- Incentives for Health Communication
- Positive Deviance Approach

## **UNIT IV: Health Communication and SBCC**

**12**

- Health Communication and BCC- Meaning, concept, various strategies, types.
- Strategizing health advocacy and SBCC campaigns- elements, tools and techniques
- Appraisal of interpersonal communication in health: A review of the NHM and ASHA flagship programme
- Present and future thrusts of national and international health communication agenda : Case of Zika and Ebola
- Social marketing, participatory training and campaigns of health communication.
- Role of media in promoting health
- Synergizing inter-sectoral partnerships for health advocacy and action

### **Suggested Readings:**

- Barur, V. (1999) *Private Health Care in India*. New Delhi: Sage Publications.
- Easterling, D., Gallagher, K.; Lodwick, D. (2003) *Promoting Health at the Community Level*. Thousand Oaks, California: Sage Publications.
- Lapinskig, M.; Kunjhat, W. K. (1998) *Health and Communication Campaigns*. Westport,

CT: Greenwood Publication Group.

- Park, K. (2000). *Essential of Community Health*. Jaipur: M/s Banarsidas Bhanot.
- Srinivasan, K.; Valassoff, M. (2001) *Population Development Nexus in India*. New Delhi: Tata McGraw Hill Publishing Co Ltd.
- Gupta, J.A. (2000) *New Reproductive Technologies – Women's Health and Autonomy*. New Delhi: Sage Publications.
- Harrington, N. (2014). *Health Communication: Theory, Method, and Application*: UK : Routledge
- USAID & FHI. (2002). *Behavior Change Communication (BCC) for HIV/AIDS: A Strategic Framework*. Arlington, U.S.A: Family Health International Institute for HIV/AIDS.
- Singhal, A., Kreps, G. (2013). *Health Communication: Strategies for Developing Global Health Programs*. New York: Peter Lang.

### Teaching Plan:

- **Week 1:** Intrinsic linkage between health and development, Health situation, concept of community health, epidemiology, demography, preventive and promotive health.
- **Week 2:** Socio cultural perceptions and motivations towards health., Health care systems- types- contemporary and traditional systems, communitization of health, socio-cultural context of health care and delivery systems, Social Determinants of health
- **Week 3:** Hierarchy of Indian Public Health System, Health Economics- Expenditure on public health- concept, public, private, and social funding. Demand versus need, future challenges.
- **Week 4:** Health care issues across life cycle- children, adolescents, men, women and the elderly- national and international perspectives. Nutritional problems and their implications, Food and nutritional security
- **Week 5:** Reproductive and Child Health (RCH) –maternal and child mortality status. Traditional and contemporary RCH practices and issues, Communicable and Non-communicable diseases
- **Week 6:** Social Health issues- Drugs Tobacco, alcohol- prevalence prevention and rehabilitation, Environment and health- Pollution, toxicity, quality, contaminations, residues and adulteration issues –prevalence, health implications, Health issues during disaster and emergencies and special circumstances- assessment and surveillance of affected groups, relief and rehabilitation strategies
- **Week 7:** Health Communication: Indian and Global Perspectives, Innovative Approaches in Health Communication
- **Week 8:** Entertainment Education, Campaigns
- **Week 9:** Incentives for Health Communication, Positive Deviance Approach
- **Week 10:** Health Communication and BCC- Meaning, concept, various strategies, types, Present and future thrusts of national and international health communication agenda : Case of Zika and Ebola
- **Week 11:** Strategizing health advocacy and SBCC campaigns- elements, tools and techniques, Appraisal of interpersonal communication in health: A review of the NHM and ASHA flagship programme
- **Week 12:** Social marketing, participatory training and campaigns of health communication, Role of media in promoting health, Synergizing inter-sectoral partnerships for health

advocacy and action

**Facilitating the achievement of Course Learning Outcomes:**

<b>Unit.No</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning activity</b>	<b>Assessment tasks</b>
1	Enhanced understanding of the multi-faceted nature of community health	Presentation, videos on Community Health, visits	Secondary review, report on visits made
2	Develop a holistic understanding of sociology of health and people's perception towards health.	Presentation, readings related to the topic will be shared	Students are assessed for their presentation, term paper
3	Critique policies, intervention programmes, and strategies adopted for addressing community health issues.	Presentation, mission documents and government websites, success stories	Students identify and present success stories, test
4	Gain an insight into SBCC interventions and techniques in the area of health.	Presentation, select readings related to the topic will be shared	Students participation in discussion will be gauged, Group activity on template design

**SOCIAL AND BEHAVIOR CHANGE COMMUNICATION: HEALTH & WELLNESS PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To develop an understanding of health data sources, indicators and appreciate SBCC interventions in the area of health.

**Course Learning Outcomes:**

Student will be able to-

1. Enhanced analytical understanding of the health related data and indicators.
2. Application of research tools to understand the state of health, effect of social determinants on health and people's perception about health related issues.

3. Critique intervention programmes, campaigns and SBCC strategies adopted for addressing community health issues.
4. Develop a SBCC intervention tool kit for any health related issue.

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT 1</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Health related data sources: Census of India, NFHS, DLHS</li> <li>• World Health Data sources: WHO, FHI360, UNICEF</li> <li>• Analysis and interpretation of health related data and indicators.</li> </ul>	
<b>UNIT II</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Health information related tools to understand the state of health , effect of social determinants on health and people’s perception about health related issues.</li> <li>• Interview : Standardized tool, Designing structured and unstructured interview schedule</li> <li>• Designing structured and unstructured questionnaire</li> <li>• Case Study as method to elicit health based information</li> <li>• Positive Deviance enquiry in Health based practices</li> <li>• Analysis and interpretation of data gathered</li> </ul>	
<b>UNIT III:</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• SBCC Campaigns for health</li> <li>• Pulse Polio Campaign, RRE Campaign, Fight Ebola Campaign</li> <li>• Critical Analysis of SBCC Campaigns and strategies</li> </ul>	
<b>UNIT IV:</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Development of SBCC tool kit on any issue related to health with respect to :</li> <li>• Communication Principles</li> <li>• Socio-economic context</li> <li>• Message design</li> <li>• Channel Selection</li> <li>• Audience targeting and segmentation</li> <li>• Developing Feedback mechanism</li> </ul>	

**Suggested Readings:**

- Barur, V. (1999) *Private Health Care in India*. New Delhi: SagePublications.
- Easterling, D., Gallagher, K.; Lodwick, D. (2003) *Promoting Health at the Community Level*. Thousand Oaks, California: SagePublications.
- Lapinskig, M.; Kunjhat, W. K. (1998) *Health and Communication Campaigns*. Westport, CT: Greenwood PublicationGroup.
- Park, K. (2000). *Essential of Community Health*. Jaipur: M/s BanarsidasBhanot.
- Srinivasan, K.; Valassoff, M. (2001) *Population Development Nexus in India*. New Delhi: Tata McGraw Hill Publishing CoLtd.
- Gupta, J.A. (2000) *New Reproductive Technologies – Women’s Health andAutonomy*.

New Delhi: Sage Publications.

- Harrington, N. (2014). *Health Communication: Theory, Method, and Application*: UK : Routledge
- USAID & FHI. (2002). *Behavior Change Communication (BCC) for HIV/AIDS: A Strategic Framework*. Arlington, U.S.A: Family Health International Institute for HIV/AIDS.
- Singhal, A., Kreps, G. (2013). *Health Communication: Strategies for Developing Global Health Programs*. New York: Peter Lang.

## **SOCIAL AND BEHAVIOR CHANGE COMMUNICATION: CLIMATE CHANGE & SUSTAINABLE DEVELOPMENT**

### **THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

#### **Course Objectives:**

To develop a holistic understanding of perspectives influencing climate change and sustainable development.

#### **Course Learning outcomes:**

Student will be able to -

1. Enhanced understanding of issues and perspectives influencing environmental sustainability.
2. Understanding the linkages between environment, Climate change and sustainable development.
3. Sensitization towards pollution and its harmful impact on climate change.
4. Gaining an insight into SBCC interventions and techniques in the area of climate change and sustainable development.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Understanding the Environment & Sustainable Development**

**12**

- Structure and composition of environment- Ecosystems of the world, pathways in ecosystem and their interrelationships.
- Environmental Resources – Nature, types, status- national and international perspectives
- Ownership and control of natural resources- historical and contemporary perspectives.
- Common Property Resources (CPRs)- concept, status and management issues
- Sustainable Development : Concept, Key pillars, Approaches, Action and Agenda.
- Linkage between environment population and development, Impact of lifestyles and changing consumption patterns on environment.
- Indigenous knowledge systems and environmental sustainability
- Environmental legislations and policies, International Environment agreements/protocols.

- Sustainable Development Goals : Goals, Targets, Indicators, India's present situation, Strategies towards SDGs attainment.

## **UNIT II: Environment and Climate Change**

**16**

- Changes in the environment- types, hazards and risks.
- Factors affecting changes in the environment –socio, economic, cultural and geographic.
- Environmental Crisis-. Macro-micro perspectives- national and international scenario.
- Climate change : Concept, significance and causes
- Concerns of Climate Change : Impact on agriculture, forests, biodiversity, water resources, coastal zones,
- Vulnerability and resilience
- International initiatives : IPCC, UNFCCC, COPs (Kyoto, Doha, Paris Agreement)
- National Action Plan on Climate Change (National Solar Mission, National Mission on Sustainable Habitat, National Mission for Enhanced Energy Efficiency, National Water Mission, National Mission for sustaining the Himalayan Ecosystem, National Mission for a Green India, National Mission for Sustainable Agriculture, National Mission on Strategic Knowledge for Climate Change)
- India's National Strategies for Climate Change, Adaptation and Mitigation

## **Unit III: Pollution Control & Management: Impact on Climate Change**

**8**

- Environmental pollution- types, causes, level, effects on health, quality of life and climate change.
- Pollution monitoring and control- methods and techniques
- Environmental Impact Assessment -Energy budget, energy transfers, environmental foot-printing, energy ladder, population consumption patterns.
- Indigenous and modern technology based solutions, their synergy, cost-benefit analysis of options.
- People's participation in design and management of pollution control and management systems

## **UNIT IV: Climate Change & Sustainable Development Communication and SBCC**

**12**

- Climate Change & Sustainable Development Communication and SBCC- Meaning, concept, various strategies, types.
- Present and future thrusts of national and international environment communication agenda : Case of Air Pollution and Water Crisis
- Role of media in promoting Climate Change Sensitization & Sustainable Development. Networking, Lobbying and Mobilizing pressure groups, citizen's action and people's participation in Climate Change & Sustainable Development movements and campaigns.
- Synergizing inter-sectoral partnerships for Climate Change & Sustainable Development advocacy and action

### Suggested Readings:

- Bapat, J. (2005). *Development Projects and Critical Theory of Environment*. New Delhi: Sage Publications.
- Chauhan, I.S.; Chauhan, A. (1998) *Environmental Degradation; Socio-Economic Consequences*. Jaipur: Rawat Publishers.
- Gadgil, M. and Guha, R. (1995) *Ecology and Equity*. New Delhi, Penguin Books.
- Jodha, N.S. (1991). *Rural Common Property Resources: A Growing Crisis*. London: IIED.
- Maurya, S.D. (1989) *Urbanization and Environmental Problems*. Allahabad: Chug Publications
- Sethi, I., Sethi, M.S.; Iqbal, S.A. (1991). *Environment Pollution: Causes Effects and Controls*. New Delhi: Commonwealth Publishers.
- Stavros Pouloupoulos, S, Inglezakis, V. (2016). *Environment and Development: Basic Principles, Human Activities, and Environmental Implications*. Elsevier
- Shanmugam, K; Kumar, K. (2015). *Environment and Development: Essays in Honour of Dr U. Sankar Hardcover*. New Delhi: Sage

### Teaching Plan:

- **Week 1:** Structure and composition of environment- Ecosystems of the world, pathways in ecosystem and their interrelationships, Environmental Resources – Nature, types, status- national and international perspectives
- **Week 2:** Ownership and control of natural resources- historical and contemporary perspectives, Common Property Resources (CPRs)- concept, status and management issues
- **Week 3:** Sustainable Development : Concept, Key pillars, Approaches, Action and Agenda, Linkage between environment population and development, Impact of lifestyles and changing consumption patterns on environment, Indigenous knowledge systems and environmental sustainability, Sustainable Development Goals : Goals, Targets, Indicators, India's present situation, Strategies towards SDGs attainment
- **Week 4:** Environmental legislations and policies, International Environment agreements/protocols, Changes in the environment- types, hazards and risks, Factors affecting changes in the environment – socio, economic, cultural and geographic, Linkage between environment population and development
- **Week 5:** Changes in the environment- types, hazards and risks, Factors affecting changes in the environment – socio, economic, cultural and geographic, Environmental Crisis-. Macro-micro perspectives- national and international scenario.
- **Week 6:** Climate change : Concept, significance and causes, concerns of Climate Change : Impact on agriculture, forests, biodiversity, water resources, coastal zones, Vulnerability and resilience
- **Week 7:** International initiatives : IPCC, UNFCCC, COPs (Kyoto, Doha, Paris

Agreement), National Action Plan on Climate Change (National Solar Mission, National Mission on Sustainable Habitat, National Mission for Enhanced Energy Efficiency, National Water Mission, National Mission for sustaining the Himalyan Ecosystem, National Mission for a Green India, National Mission for Sustainable Agriculture, National Mission on Strategic Knowledge for Climate Change), India's National Strategies for Climate Change, Adaptation and Mitigation

- **Week 8:** Environmental pollution- types, causes, level, effects on health, quality of life and climate change, Indigenous and modern technology based solutions, their synergy, cost-benefit analysis of options.
- **Week 9:** Pollution monitoring and control- methods and techniques, Environmental Impact Assessment -Energy budget, energy transfers, environmental foot-printing, energy ladder, population consumption patterns, People's participation in design and management of pollution control and management systems
- **Week 10:** Climate Change & Sustainable Development Communication and BCC- Meaning, concept, various strategies, types
- **Week 11:** Present and future thrusts of national and international environment communication agenda : Case of Air Pollution and Water Crisis, Role of media in promoting Climate Change Sensitization & Sustainable Development.
- **Week 12:** Networking, Lobbying and mobilizing pressure groups. Citizen action and people's participation in Climate Change & Sustainable Development movements and campaigns, Synergizing inter-sectoral partnerships for Climate Change & Sustainable Development advocacy and action

### Facilitating the achievement of Course Learning Outcomes:

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Enhanced understanding of issues and perspectives influencing environmental sustainability.	Presentation , videos	Secondary review , quiz
2	Understanding the linkages between environment, Climate change and sustainable development.	Presentation, readings related to the topic will be shared, visits	Term paper, open book test
3	Sensitization towards pollution and its harmful	Presentation, mission documents and	Visit reports, quiz, test

	impact on climate change.	Government Websites,visits	
4	Gaining an insight into SBCC interventions and techniques in the area of climate change and sustainable development.	Presentation,select readings related to the topic will be shared,discussions	Students participation in discussion , group activity on template design

**SOCIAL AND BEHAVIOR CHANGE COMMUNICATION: CLIMATE CHANGE & SUSTAINABLE DEVELOPMENT PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To develop an understanding of environment/climate change data sources, indicators and appreciate SBCC interventions in the area of climate change and sustainable development.

**Course Learning outcomes:**

Student will be able to-

1. Enhanced analytical understanding of the environment/climate change related data and indicators.
2. Application of research tools to understand the state of pollution, its factors and impact on climate change.
3. Critique intervention programmes, campaigns and SBCC strategies adopted for addressing climate change and sustainable development..
4. Develop a SBCC intervention tool kit for any climate change and sustainable development.related issue.

**CONTENTS**

**PERIODS**

**UNIT 1**

**12**

- Review of Climate change and sustainable development related data sources
- Indices: Environmental Sustainability Index (ESI), Dashboard of Sustainability (DS), Wellbeing index (WI), Ecological footprint (EF), Living planet index (LPI), Happy Planet Index (HPI).

- Analysis and interpretation of climate change and sustainable development related data and indicators.

## **UNIT II**

**12**

- Climate change and sustainable development information related tools to understand the state of pollution, its factors and impact on climate change, people's perception.
- Interview : Standardized tool, Designing structured and unstructured interview schedule
- Designing structured and unstructured questionnaire
- Case Study as method to elicit climate change and sustainable development related based information
- Analysis and interpretation of data gathered

## **UNIT III**

**12**

- SBCC Campaigns for Climate change and sustainable development
- WWF, 350, Connect4Climate.
- Critical Analysis of SBCC Campaigns and strategies

## **UNIT IV:**

**12**

- Development of SBCC tool kit on any issue related to Climate change and sustainable development related with respect to :
  - i. Communication Principles
  - ii. Socio-economic context
  - iii. Message design
  - iv. Channel Selection
  - v. Audience targeting and segmentation
  - vi. Developing Feedback mechanism

### **Suggested Readings :**

- Bapat, J. (2005). *Development Projects and Critical Theory of Environment*. New Delhi: Sage Publications.
- Chauhan, I.S.; Chauhan, A. (1998) *Environmental Degradation; Socio-Economic Consequences*. Jaipur: Rawat Publishers.
- Jodha, N.S. (1991). *Rural Common Property Resources: A Growing Crisis*. London: IIED.
- Sethi, I., Sethi, M.S.; Iqbal, S.A. (1991). *Environment Pollution: Causes Effects and Controls*. New Delhi: Commonwealth Publishers.
- Gadgil, M. and Guha, R. (1995) *Ecology and Equity*. New Delhi, Penguin Books.
- Maurya, S.D. (1989) *Urbanization and Environmental Problems*. Allahabad: Chug Publications
- Stavros Pouloupoulos, S, Inglezakis, V. (2016). *Environment and Development: Basic Principles, Human Activities, and Environmental Implications*. Elsevier
- Shanmugam, K; Kumar, K. (2015). *Environment and Development: Essays in Honour of Dr U. Sankar Hardcover*. New Delhi: Sage Publications

**SOCIAL AND BEHAVIOR CHANGE COMMUNICATION:  
CONSUMPTION AND PUBLIC POLICY  
THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To become familiar with the inter-linkages between changing economic environment, consumption practices and sustainable development.

**Course Learning outcomes:**

Student will be able to-

1. Enhanced familiarity with the inter-linkages between changing economic environment, consumption practices and sustainable development.
2. Develop a holistic understanding of consumption behaviour of families and communities and its impact on national and global resources.
3. Exposure to content related to consumers role, rights, and responsibilities as Indian and global citizens in promoting sustainable consumption and sustainable development.
4. Gain an insight into SBCC interventions and processes for improved consumption practices.

**CONTENTS**

**PERIODS**

**UNIT I: Consumption Behaviour of Families**

**12**

- Understanding Consumption – meaning, concept, impact on families and societies
- Consumption patterns- historical and contemporary perspectives
- Factors and determinants of consumption. Impact on families and communities.
- Consumption practices of different communities- North South differences, rural, urban differences, class differences; impact of changing socio-economic environment
- Theories, models and practices for understanding consumption behavior
- Production, Distribution and Marketing strategies and their implications on Consumption

**UNIT II: Consumption development and Public policy**

**12**

- Consumption and sustainable development - intrinsic linkages between consumption behavior of families, sustainability of resources and lifestyles
- Trends in consumption practices of families and communities – Indian and global perspectives.
- Consumption and development – indicators – Indian and global scenario. Distribution of income expenditure and consumption in India : implications on sustainability.
- Impact of national and global policies and programmes on consumption practices of families.
- Changing economic environment- impact on resources-demand and prioritization– Indian and global trends- emerging policy issues.
- Impact of liberalization, globalization and change on consumption behaviour of families

### **UNIT III: Citizens Rights and Responsibilities in a Globalizing Environment** **12**

- Consumers in the India – Characteristics of Indian families as a consumption unit.
- Problems of consumers in the Indian socio-economic and development frame work - rural, urban, tribal.perspectives
- Consumer protection in India- History of consumer movement in India- origin, role and contemporary perspectives.
- Consumer rights and responsibilities- laws and other safe guards and mechanisms
- Role of consumer organisations and citizens groups- National, regional, global.

### **UNIT IV: Consumer Education and Action: SBCC Perspective** **12**

- Strategizing advocacy and SBCC campaigns- Elements, tools and techniques
- Strategies for consumer protection- consumer education, networking, Lobbying and mobilizing pressure groups. Citizen action and people's participation in consumer movement and campaigns.
- Synergizing inter-sectoral partnerships for public policy, advocacy and action- Indian and global perspectives
- National and global campaigns for sustainability, consumption and development.

#### **Suggested Readings:**

- Bhagwati P. (1993) *Indian Economic Reforms*. New Delhi: Ministry of Finance.
- Eastwood, B. D. (1985) *The Economics of Consumer Behaviour*. Boston: Allwyn & Becon.
- Reisch, L, Thøgersen, J. (2016). *Handbook of Research on Sustainable Consumption*. Edward Elgar Publishing
- Sawhney, H.K. (2001) *Indian Consumer*. New Delhi: Phoenix Publishers.
- Chaudhary, P. (1978) *The Indian Economy - Poverty and Development*. New Delhi: Vikas Published House Pvt.Ltd.
- Shiva, V. (1996) *Future of our seeds, Future of Our Farmers; Agricultural Biodiversity, Intellectual Property Rights and Farmer's Rights*. New Delhi: Research Foundation for Science, Technology and Natural Resource Policy.
- Swaminathan, M. (1991) *From Stockholm to Rio-De-Jenario – The Road to Sustainable Agriculture*. Chennai: M.S. Swaminathan Research Foundation.
- Stillerman, J. (2015). *The Sociology of Consumption: A Global Approach*. Polity ISBN-13: 978-0745661285, ISBN-10: 0745661289

#### **Teaching Plan:**

- **Week 1:** Understanding Consumption – meaning, concept, impact on families and societies, Consumption patterns- historical and contemporary perspectives, Consumption practices of different communities- North South differences, rural, urban differences, class differences; impact of changing socio-economic environment
- **Week 2 :** Theories, models and practices for understanding consumption behavior
- **Week 3:** Factors and determinants of consumption. Impact on families and communities, Production, Distribution and Marketing strategies and their implications on Consumption
- **Week 4:** Consumption and sustainable development - intrinsic linkages between

consumption behavior of families, sustainability of resources and lifestyles, Impact of national and global policies and programmes on consumption practices of families.

- **Week 5:** Trends in consumption practices of families and communities – Indian and global perspectives, Consumption and development – indicators – Indian and global scenario. Distribution of income expenditure and consumption in India : implications on sustainability.
- **Week 6:** Changing economic environment- impact on resources-demand and prioritization– Indian and global trends- emerging policy issues, Impact of liberalization, globalization and change on consumption behaviour of families
- **Week 7:** Consumers in the India – Characteristics of Indian families as a consumption unit, Problems of consumers in the Indian socio-economic and development frame work -rural, urban, tribal.perspectives
- **Week 8:** Consumer protection in India- History of consumer movement in India- origin, role and contemporary perspectives, consumer rights and responsibilities- laws and other safe guards and mechanisms
- **Week 9:** Role of consumer organisations and citizens groups- National, regional, global.
- **Week 10:** Strategizing advocacy and SBCC campaigns- Elements, tools and techniques
- **Week 11:** Strategies for consumer protection- consumer education, networking, Lobbying and mobilizing pressure groups. Citizen action and people’s participation in consumer movement and campaigns.
- **Week 12:** Synergizing inter-sectoral partnerships for public policy, advocacy and action- Indian and global perspectives, National and global campaigns for sustainability, consumption and development.

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Enhanced familiarity with the inter-linkages between changing economic environment, consumption practices and sustainable development.	Presentation ,videos, discussions	Secondary review, students participation in discussion will be gauged.
2	Develop a holistic understanding of consumption behaviour of families and communities and its impact on national and global resources.	Presentation, readings related to the topic will be shared	Students are assessed for their presentation, quiz

3	Exposure to content related to consumers role, rights, and responsibilities as Indian and global citizens in promoting sustainable consumption and sustainable development.	Presentation, Government Websites, Videos	Identify and study their own consumption patterns and present the same
4	Gain an insight into SBCC interventions and processes for improved consumption practices.	Presentation, select readings related to the topic will be shared	Students participation in discussion will be gauged, group activity on template design

**SOCIAL AND BEHAVIOR CHANGE COMMUNICATION:  
CONSUMPTION AND PUBLIC POLICY  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To develop an understanding of consumption related data sources, indicators and appreciate SBCC interventions in the area of consumption and public policy.

**Course Learning Outcomes:**

Student will be able to-

1. Enhanced analytical understanding of the consumption related data and indicators.
2. Application of research tools to understand the consumer buying behaviours and the factors that impact the consumption pattern of families.
3. Critique intervention programmes, campaigns and SBCC strategies adopted for addressing consumption and public policy.
4. Develop a SBCC intervention tool kit for any consumption related issue.

**CONTENTS**

**PERIODS**

**UNIT 1**

**12**

- Consumption and public policy related data sources: Census of India
- Data Reports of Marketing Agencies
- Analysis and interpretation of consumption and public policy related data and indicators.

**UNIT II**

**12**

- Consumption information related tools to understand the consumer buying behaviours and the factors that impact the consumption pattern of families.

- Interview : Standardized tool, Designing structured and unstructured interview schedule
- Designing structured and unstructured questionnaire
- Case Study as method to elicit the innovative and economical consumption practices
- Analysis and interpretation of data gathered

### UNIT III

12

- SBCC Campaigns for rights of consumer
- Consumer movements, Jaga Grahak Jago Campaign
- Critical Analysis of SBCC Campaigns and strategies

### UNIT IV

12

- Development of SBCC tool kit on any issue related to consumption and public policy respect to :
  - Communication Principles
  - Socio-economic context
  - Message design
  - Channel Selection
  - Audience targeting and segmentation
  - Developing Feedback mechanism

### Suggested readings:

- Barur, V. (1999) *Private Health Care in India*. New Delhi: Sage Publications.
- Easterling, D., Gallagher, K.; Lodwick, D. (2003) *Promoting Health at the Community Level*. Thousand Oaks, California: Sage Publications.
- Gupta, J.A. (2000) *New Reproductive Technologies – Women's Health and Autonomy*. New Delhi: Sage Publications.
- Lapinskig, M.; Kunjhat, W. K. (1998) *Health and Communication Campaigns*. Westport, CT: Greenwood Publication Group.
- Park, K. (2000) *Essential of Community Health*. Jaipur: M/s Banarsidas Bhanot.
- Reisch, L, Thøgersen, J. (2016). *Handbook of Research on Sustainable Consumption*. Edward Elgar Publishing
- Srinivasan, K.; Valassoff, M. (2001) *Population Development Nexus in India*. New Delhi: Tata McGraw Hill Publishing Co Ltd.
- Stillerman, J. (2015). *The Sociology of Consumption: A Global Approach*. Polity ISBN-13: 978-0745661285, ISBN-10: 0745661289
- USAID. (2010). *Behavior Change Communication (BCC) Learning Resource Package Facilitator's Guide*.

**SOCIAL AND BEHAVIOR CHANGE COMMUNICATION:  
PEACE AND HUMAN RIGHTS  
THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To develop an understanding of relationship between conflict, peace and development process.

**Course Learning outcomes:**

Student will be able to-

1. Develop sensitivity to the issues and significance of conflict management and peace in communities
2. Enhanced understanding of the relationship between conflict, peace and development process
3. Critique policies, intervention programmes, and strategies adopted for addressing peace, human rights and conflict management issues.
4. Gain an insight into SBCC interventions and techniques in the area for conflict resolution and peace.

**CONTENTS**

**PERIODS**

**UNIT I: Concept and Approaches**

**12**

- Conflict- nature, concept and levels, causes of conflict – historical and contemporary perspectives
- Impact of Conflict- micro- macro perspectives- impacts on individuals, communities, nations and the Globe.
- Conflict and violence in women's lives. Importance of women and women's issues in peacebuilding.
- Human rights : Concept, Types and Significance

**UNIT II: Cultural Influence on Conflict and Peace**

**12**

- Cultural differences, value systems and world views about violence and peace
- Identity- ethnic identity, ethnocentrism and nationalism as they relate to conflict and violence.
- Discrimination – racial, ethnic, religious and or economic - their impact on identity and conflict.
- Ideological perspectives about peace - Gandhian and post Gandhian perspectives, peace and war resistance movements, influence of socio- economic, political ideologies.
- Religious philosophies and their role in creating discord and concordance for peace. Role of religious and other leadership.
- Globalization- influence on social economic political cultural processes in communities and conflict resolution.

### UNIT III: Perspectives and Framework

12

- Aspects influencing conflict resolution and human rights perspectives.
- Role, importance of conflict resolution and peace building for sustainable development.
- Human rights perspectives in conflict transformation.
- Community dynamics and their influence on conflicts and peace building processes.
- Role of Community organizations and institutions, government and corporations in prevention of violence and promoting peace.
- Dynamics of humanitarian assistance and development programs on conflict and peace.
- Local, National and International bodies involved in conflict resolution- Their structure, role and suitability.

### UNIT IV: SBCC: Techniques and Strategies for Conflict Transformation

12

- SBCC and mechanisms for creating a culture of peace within different societal groups.
- SBCC Intervention and techniques for conflict transformation- Selection and building skills for facilitating conflict transformation.
- Rituals and symbolic forms of communication –role and importance for peace building.
- Theatre, artistic and spiritual processes in social and personal transformation.
- Role of mass media in conflict communication and peacebuilding.
- Peace Education- Scope of teaching conflict resolution and Peace building within formal and informal educational contexts.
- Techniques and innovative programmes for peace education-principles and practices for designing training/education for conflict transformation.

#### Suggested Readings:

- Backer, D; Bahvnani, R. (2016). *Peace and Conflict*. Routledge ISBN-13: 978-1857438291, ISBN-10: 1857438299
- Behera, C N. (2000). *People to People Contact in South Asia* New Delhi: Manohar Publications.
- Bose, S. (2003) *Kashmir: Roots of Conflict, Paths to Peace*. Cambridge: Harvard University Press.
- Manchanda, R. (2001) *Women, War and Peace in South Asia*. New Delhi: Sage Publications.
- Millar, G. (2017). *Ethnographic Peace Research: Approaches and Tensions*. Springer
- Phukon, G.(Ed.) (2002). *Ethnicity and Polity in South Asia*. New Delhi: South Asian Publishers.
- Samaddar, R.; Helmut, R. (2001) *Peace as a Process: Reconciliation and Conflict Resolution in South Asia*. New Delhi: Manohar Publishers and Distributors.
- Weber, T.(1989). *Conflict Resolution and Gandhian Ethics*. New Delhi: Gandhi Peace Foundation.

#### Teaching Plan:

- **Week 1:** Conflict- nature, concept and levels, causes of conflict – historical and contemporary perspectives, Impact of Conflict- micro- macro perspectives- impacts on

individuals, communities, nations and theGlobe.

- **Week 2:** Conflict and violence in women’s lives. Importance of women and women’s issues in peacebuilding, Human rights : Concept, Types and Significance
- **Week 3:** Cultural differences, value systems and world views about violence andpeace, Discrimination – racial, ethnic, religious and or economic.
- **Week 4:**Ideological perspectives about peace - Gandhian and post Gandhian perspectives, peace and war resistance movements, influence of socio- economic, political ideologies.
- **Week 5:**Religious philosophies and their role in creating discord and concordance for peace. Role of religious and otherleadership,
- **Week 6:** Globalization- influence on social economic political cultural processes in communities and conflictresolution.
- **Week 7:** Aspects influencing conflict resolution and human rightsperspectives. Role, importance of conflict resolution and peace building for sustainable development.,Human rights perspectives in conflictransformation.
- **Week 8:**Community dynamics and their influence on conflicts and peace building processes, Role of Community organizations and institutions, government and corporations in prevention of violence and promotingpeace.
- **Week 9:**Dynamics of humanitarian assistance and development programs on conflict and peace, Local, National and International bodies involved in conflict resolution- Their structure, role andsuitability.
- **Week 10:** SBCC and mechanisms for creating a culture of peace within different societalgroups, SBCC Intervention and techniques for conflict transformation- Selection and building skills for facilitating conflictransformation.
- **Week 11:**Rituals and symbolic forms of communication –role and importance for peace building, Theatre, artistic and spiritual processes in social and personaltransformation, Role of mass media in conflict communication and peacebuilding.
- **Week 12:** Peace Education- Scope of teaching conflict resolution and Peace building within formal and informal educationalcontexts, Techniques and innovative programmes for peace education-principles and practices for designing training/education for conflictransformation.

**Facilitating the achievement of Course Learning Outcomes:**

<b>Unit.No</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning activity</b>	<b>Assessment tasks</b>
<b>1</b>	Develop sensitivity to the issues and significance of conflict mangement and peace incommunities	Presentation ,videos on Global and National perspectives ,discussion	Secondary review ,students participation in discussion .
<b>2</b>	Enhanced understanding of the relationship between conflict,	Presentation,readings related to the topic will be shared	Presentation on country specific initiatives, open book test.

	peace and development process		
<b>3</b>	Critique policies, intervention programmes, and strategies adopted for addressing peace, human rights and conflict management issues.	Presentation, mission documents and government websites, visits	Report of visits, quiz, term paper
<b>4</b>	Gain an insight into SBCC interventions and techniques in the area for conflict resolution and peace.	Presentation, select readings, discussion	Students participation in discussion, group activity on template design

**SOCIAL AND BEHAVIOR CHANGE COMMUNICATION: PEACE AND HUMAN RIGHTS PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs**

**Course Objectives:**

To develop an understanding of peace and conflict related data, indicators and appreciate SBCC interventions in the area of peace and conflict resolution.

**Course Learning outcomes:**

Student will be able to-

1. Enhanced analytical understanding of the peace and conflict related data and indicators.
2. Application of research tools to understand the state of peace and conflict resolution and people's perception of peace and conflict resolution in their communities
3. Critique intervention programmes, campaigns and SBCC strategies adopted for addressing peace and conflict resolution.
4. Develop a SBCC intervention tool kit for peace and conflict resolution.

**CONTENTS**

**PERIODS**

**UNIT 1**

**12**

- Peace & Conflict Resolution data sources: Institute for Economics and Peace (IEP), MoHA, Annual Report HRC
- Peace related development indicators: World Peace Index, Meaning in Life Index, Happy Planet Index, Corruption Perception Index, UL Safety Index.

- Analysis and interpretation of peace and conflict related data and indicators.

## UNIT II

12

- Peace and conflict information related tools to understand the state of peace, effect of racial, ethnic, religious and economic determinants on peace, identity and conflict.
- Interview : Standardized tool, Designing structured and unstructured interview schedule
- Designing structured and unstructured questionnaire
- Analysis and interpretation of data gathered

## UNIT III

12

- SBCC Campaigns for peace and conflict resolution
- Refugee Crisis, Save Syria, Strategic killing of Osama Bin Laden
- Critical Analysis of SBCC Campaigns and strategies

## UNIT IV

12

- Development of SBCC tool kit on peace and conflict resolution :
  - Communication Principles
  - Socio-economic context
  - Message design
  - Channel Selection
  - Audience targeting and segmentation
  - Developing Feedback mechanism

### Suggested Readings:

- Backer, D; Bahvnani, R. (2016). *Peace and Conflict*. Routledge ISBN-13: 978-1857438291, ISBN-10: 1857438299
- Millar, G. (2017). *Ethnographic Peace Research: Approaches and Tensions*. Springer
- Manchanda, R. (2001) *Women, War and Peace in South Asia*. New Delhi: Sage Publications.
- Samaddar, R.; Helmut, R. (2001) *Peace as a Process: Reconciliation and Conflict Resolution in South Asia*. New Delhi: Manohar Publishers and Distributors.
- Weber, T. (1989) *Conflict Resolution and Gandhian Ethics*. New Delhi: Gandhi Peace Foundation.
- Behera, C N. (2000). *People to People Contact in South Asia* New Delhi: Manohar Publications.
- Bose, S. (2003) *Kashmir: Roots of Conflict, Paths to Peace*. Cambridge: Harvard University Press.
- Phukon, G. (Ed.) (2002) *Ethnicity and Polity in South Asia*. New Delhi: South Asian Publishers.
- Health Communication Capacity Collaborative HC3 (2016). *Social and Behavior Change Communication for Emergency Preparedness Implementation Kit*. © 2016, Johns Hopkins Center for Communication Programs
- USAID. (2010). *Behavior Change Communication (BCC) Learning Resource Package Facilitator's Guide*

**EVALUATION OF DEVELOPMENT PROGRAMMES & POLICIES  
ELECTIVE COURSE / SEMESTER IV**

**THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To equip students with tools that sharpen their skills as both consumers and producers of applied quantitative research and expose students to the theoretical and conceptual underpinnings of impact evaluation techniques, show how these techniques are implemented in various empirical studies.

**Course Learning Outcomes:**

Student will be able to-

1. Understand the reasoning behind and the rationale of major impact evaluation techniques
2. Be able to determine the appropriate technique in order to rigorously evaluate the impact of a policy/programme.
3. Conduct empirical research using modern techniques for policy evaluation.
4. Exposure to the use of ICT in evaluation.

**CONTENTS**

**PERIODS**

**UNIT I : Introduction**

**12**

- Impact evaluation – concept and definitions
- Key approaches to impact evaluation
- Current trends and practices in impact evaluation
- Changing perspectives in impact evaluation
- Social impact evaluation – concept and techniques

**UNIT II: Evaluation Designs and techniques**

**12**

- Research designs for formative and summative evaluation, issues of causality and attribution, Developmental evaluation.
- RCT designs – use and implementation, results and analysis
- Mixed methods - Quasi experimental designs and case control studies
- Use of qualitative, quantitative and participatory tools in evaluation
- Practices for designing evaluation instruments
- Sampling, sample size and Identifying what variables, hypothesis and levels of measurement
- Systematic reviews and meta-analysis

**UNIT III: Tools and techniques for assessing impact of programmes.**

**12**

- ANOVA,MANOVA
- Instrumental variables technique
- Propensity score matching,

- Regression discontinuity
- Difference-in-difference estimation, Odds Ratio
- Participatory techniques and GIS mapping

#### UNIT IV: ICTs & Evaluation

12

- ICT based M&E tools
- Data responsibility and big data analysis
- ICT mediated qualitative and quantitative data
- Data visualization, Mapping and Dashboards
- Human centered design, Real-time M&E

#### Suggested Readings:

- Gertler, P & Martinez, S. (2016). *Impact Evaluation in Practice*. World Bank Publications.
- Jahad, A. R. & Enkin, M. (2007). *Randomized Controlled Trials: Questions, Answers and Musings*. Blackwell Publishing: Toronto
- Khandker, B., Koolwal and Hussain A. Samad. (2010) .*Handbook on Impact Evaluation: Quantitative Methods and Practices*. World Bank: Washington DC.
- Quinn, P. (2001). *Qualitative Research & Evaluation Methods*. Sage: London
- Stephanie, D.H. (2013). *Presenting Data Effectively, Communicating Your Findings for Maximum Impact*. Thousand Oaks :Sage Publications.

#### Teaching Plan:

- **Week 1:** Concepts and definitions, Key approaches to impact evaluation
- **Week 2:** Current trends and practices in impact evaluation, Changing perspectives in impact evaluation, Social impact evaluation - concept
- **Week 3:** Research designs for formative and summative evaluation, issues of causality and attribution, RCT designs – use and implementation, results and analysis
- **Week 4:** Mixed methods in RCT - Quasi experimental designs and case control studies, Use of qualitative, quantitative and participatory tools in evaluation, Practices for designing evaluation instruments
- **Week 5:** Sampling, sample size and Identifying what variables, hypothesis and levels of measurement Systematic reviews and meta-analysis
- **Week 6:** ANOVA, MANOVA , Instrumental variables technique
- **Week 7:** Propensity score matching, Regression discontinuity
- **Week 8:** Difference-in-difference estimation, Odds Ratio, Participatory techniques and GIS mapping
- **Week 9:** ICT based M&E tools and technologies that can be used, Data responsibility and big data
- **Week 10:** Data collection for qualitative and quantitative data
- **Week 11:** Data storage, Data visualization,
- **Week 12:** Mapping and Dashboards and Human centered design, Real-time M&E

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Understand the reasoning behind and the rationale of major impact evaluation techniques	Classroom discussions,presentation	Review of journal articles,Identification of evaluation designs used in different contexts.
2	Be able to determine the appropriate technique in order to rigorously evaluate the impact of a policy/programme.	Classroom discussions,participatory tools videos,presentation	Term paper, group exercise/test.
3	Conduct empirical research using modern techniques for policy evaluation.	Presentations,group discussion,discussion on select readings	Students participation in group discussion will be gauged, case study analysis,test
4	Exposure to the use of ICT in evaluation.	Discussion on select readings ,presentation, videos	Participation in group discussion ,term paper, open book test

**EVALUATION OF DEVELOPMENT PROGRAMMES & POLICIES  
PRACTICAL****Marks: 50****Duration: 3 Hrs.****Course Objectives:**

To expose students to the practical and conceptual underpinnings of impact evaluation techniques and show how these techniques are implemented in various studies.

**Course Learning Outcomes:**

Student will be able to-

1. Understand the reasoning behind and the rationale of major impact evaluation techniques.
2. Be able to determine the appropriate technique in order to rigorously evaluate the impact of a policy/programme.
3. Conduct empirical research using modern techniques for policy evaluation.
4. Exposure to the use of ICT in evaluation.

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Current trends and practices in impact evaluation</li> <li>• Social impact evaluation</li> <li>• Research designs for formative and summative evaluation, issues of causality and attribution</li> </ul>	
<b>UNIT II</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Use of qualitative, quantitative and participatory tools in evaluation</li> <li>• Practices for designing evaluation instruments</li> <li>• Sampling, sample size and Identifying what variables, hypothesis and levels of measurement</li> </ul>	
<b>UNIT III</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Tools and techniques used in impact evaluation</li> <li>• Participatory techniques and GIS mapping</li> </ul>	
<b>UNIT IV:</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Data collection - qualitative and quantitative data</li> <li>• Data visualization,</li> <li>• Mapping and Dashboards</li> </ul>	

**Suggested Readings:**

- Gertler, P & Martinez, S. (2016). *Impact Evaluation in Practice*. World Bank Publications
- Jahad, A. R. & Enkin, M. (2007). *Randomized Controlled Trials: Questions, Answers and Musings* . Blackwell Publishing: Toronto
- Quinn,P. (2001). *Qualitative Research & Evaluation Methods*. Sage: London
- Stephanie, D.H.(2013). *Presenting Data Effectively, Communicating Your Findings for Maximum Impact*. Thousand Oaks :Sage Publications.

**CORPORATE SOCIAL RESPONSIBILITY AND FUNDRAISING  
THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the role of corporate social responsibility in enabling the development of a sound understanding of corporate governance practice in a national and international context and industries. To integrate corporate governance aspects, economic viability and social and environmental impacts.

### **Course Learning Outcomes:**

Student will be able to-

1. Recognise the basic concepts of Corporate Social Responsibility and linkages between various stakeholders.
2. Assess the CSR initiatives taken in India and internationally.
3. Develop Corporate Social Responsibility initiatives for various corporate companies.
4. Examine the processes of resources mobilisation and fundraising.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Corporate Social Responsibility**

**12**

- Definition, concept, linkages to development
- Growth of CSR-historical & contemporary perspectives, national & international scenario
- Factors influencing growth of CSR in societies- ideological, socio-economic, legal& environmental perspectives
- CSR activities–nature, types, impact on development programmes
- CSR & development organisations–relationships, functioning & impact on organisational functioning
- Government initiatives for promoting CSR

#### **UNIT II: CSR Strategy and Leadership**

**12**

- Corporate motivations & behaviour for CSR – factors influencing national & international perspectives
- Theories & principles of CSR
- Corporate governance, style, leadership & CSR
- CSR Strategies-objectives, approaches, roles and tasks of a corporate managers
- Strategic corporate planning - steps to make CSR Work for Business
- Corporate Social Responsibility: programmes & initiatives – national and international

#### **UNIT III: Fundraising environment**

**12**

- Types of agencies funding development programmes, nature of support, inter sectoral partnerships and synergies.
- Fundraising- importance, nature, sources and techniques. Principle and theories of Fund raising.
- Non-financial donations and in-kind giving- nature, sources, mobilization strategies
- Donor Behaviour- needs of donors- economic, psychological and, sociological perspective; brand marketing and philanthropy
- .Fundraising ethics, ethicaldecision making, Code of Fundraising.
- Funding & impact on development initiatives and organizations

#### **UNIT IV: Planning Fundraising Strategies**

**12**

- Designing Donor Communication., audit communications and developing compelling case for support

- Fundraising Planning- designing a plan of activities, objectives, segmentation, positioning, branding and the case for support.
- Writing project proposals for grants and developing fund raising plans and strategies.

### **Suggested Readings:**

- Chatterji, M. (2014). *Corporate Social Responsibility*. New Delhi : Oxford University Press.
- Grayson D., Hodges A. (2004). *Corporate Social Responsibility- Seven Steps to Make Corporate Social Responsibility Work For Your Business*. UK: Greenleaf Publishing Limited.
- Narang R.K. (2009). *Corporate Social Responsibility-Replicable Models on Sustainable Development*. New Delhi: The Energy & Resources Institute.
- Mandal, B.N (2012). *Corporate Social Responsibility in India*. Global Vision Publishing House: Delhi.
- Rasche, A; Morsing, M; Moon, J. (2017). *Corporate Social Responsibility: Strategy, Communication, Governance*. UK : Cambridge University Press.

### **Teaching Plan:**

- **Week 1:** Definition, concept, linkages to development, growth of CSR-historical & contemporary perspectives, national & international scenario
- **Week 2:** Factors influencing growth of CSR in societies- ideological, socio-economic, legal& environmental perspectives, CSR activities–nature, types, impact on development programmes
- **Week 3:** CSR & development organisations–relationships, functioning & impact on organisational functioning, Government initiatives for promoting CSR
- **Week 4:** Corporate motivations & behaviour for CSR – factors influencing national & international perspectives,
- **Week 5:** Theories & principles of CSR, Corporate governance, style, leadership & CSR Strategies-objectives, approaches, roles and tasks of a corporate managers
- **Week 6:** Strategic corporate planning - steps to make CSR Work for Business Corporate Social Responsibility: programmes & initiatives – national and international
- **Week 7:** Types of agencies funding development programmes, nature of support, inter sectoral partnerships and synergies.
- **Week 8:** Principle and theories of Fundraising, Non-financial donations and in-kind giving-nature, sources, impact on development initiatives
- **Week 9:** Fundraising- importance, nature, sources and techniques. Fundraising ethics, introducing multiple perspectives for ethical decision making, detailed consideration of the role and implementation of the Code of Fundraising Practice.
- **Week 10:** Understanding Donor Behaviour, economics, sociology, marketing and the new field of philanthropic, psychology, genuine needs of donors.
- **Week 11:** Designing Donor Communication, audit communications to enhance their effectiveness in both monetary terms, compelling case for support, writing project proposals for grants and developing fund raising plans and strategies.
- **Week 12:** Fundamentals of Fundraising Planning, design a plan for your own fundraising activity, writing objectives that are an appropriate, concepts such as segmentation, positioning, branding and the case for support.

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Recognise the basic concepts of Corporate Social Responsibility and linkages between various stakeholders.	Classroom discussions, presentation ,videos	Review of journal articles,review case studies ,quiz
2	Assess the CSR initiatives taken in India and internationally.	Classroom discussions, presentation ,videos	Prepare a term paper ,review of journal articles, test
3	Develop Corporate Social Responsibility initiatives for various corporate companies.	Classroom discussions, presentation ,videos	Students participation in group discussion , review of journal article
4	Examine the processes of resources mobilisation and fundraising.	Discussion on select readings ,presentation, videos	Students participation in group discussion will be assessed,develop a fundraising plan

**CORPORATE SOCIAL RESPONSIBILITY AND FUNDRAISING  
PRACTICAL**

**Marks: 50****Duration: 3 Hrs.****Course Objectives:**

To understand the role of corporate social responsibility in enabling the development of a sound understanding of corporate governance practice in a national and international context and industries. To integrate corporate governance aspects, economic viability and social and environmental impacts.

**Course Learning Outcomes:**

Student will be able to-

1. Develop Corporate Social Responsibility initiatives for various corporate companies.
2. Examine the processes of resources mobilisation and fundraising.

**CONTENTS****PERIODS****UNIT I****12**

- CSR activities–nature, types, impact on development programmes
- CSR & development organisations–relationships, functioning & impact on
- organisational functioning
- Government initiatives for promoting CSR

**UNIT II** **12**

- CSR Strategies-objectives, approaches, roles and tasks of a corporate managers
- Strategic corporate planning - steps to make CSR Work for Business
- Corporate Social Responsibility: programmes & initiatives – national and international

**UNIT III** **12**

- Designing Donor Communication,
- Audit communications to enhance their effectiveness in both monetary terms, compelling case for support

**UNIT IV** **12**

- Fundamentals of Fundraising Planning, design a plan for your own fundraising activity, writing objectives that are appropriate, concepts such as segmentation, positioning, branding and the case for support.
- Writing project proposals for grants and developing fund raising plans and strategies.

**Suggested Readings:**

- Chatterji, M. (2014). *Corporate Social Responsibility*. New Delhi : Oxford University Press.
- Grayson D., Hodges A. (2004). *Corporate Social Responsibility- Seven Steps to Make Corporate Social Responsibility Work For Your Business*. UK: Greenleaf Publishing Limited.
- Narang R.K. (2009). *Corporate Social Responsibility-Replicable Models on Sustainable Development*. New Delhi: The Energy & Resources Institute.
- Mandal, B.N (2012). *Corporate Social Responsibility in India*. Global Vision Publishing House: Delhi.
- Rasche, A; Morsing, M; Moon, J. (2017). *Corporate Social Responsibility: Strategy, Communication, Governance*. UK : Cambridge University Press.

**URBAN GOVERNANCE & CIVIL SOCIETY  
THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the dynamics involved in the functioning of civil society, urban local governance structures, mechanism and arrangements facilitating the adoption and implementation of successful policies to meet the challenges of sustainable, safe and equitable urbanisation.

**Course Learning Outcomes:**

Student will be able to-

1. Understand the concept and functioning of civil society.
2. Identify the constraints in the effective performance of civil society
3. Deepen the understanding of democracy and governance and its implications for civil society

4. Understand measures that stimulate better economic and social development through developing cooperation mechanism between local and national governments.

## CONTENTS

## PERIODS

### UNIT I: Urban Growth: Prospects and Challenges

12

- Urbanisation – meaning, Concept, trends- national and international perspectives
- Growth, Structure and characteristics of urban communities
- Problems of urbanization and urban communities, Management of urban problems
- Issues and challenges and Socio-legal framework

### UNIT II: Urban governance: Approaches and Perspectives

12

- Governance – concept, nature-historical and contemporary perspectives
- Governance systems and development – linkages and perspectives
- Urban Governance systems – evolution, growth and approaches
- Partnerships, strategies and programmes for urban renewal and governance

### UNIT III: Civil society Meaning Origin and Interpretation

12

- Civil Society – meaning, concept, historical and contemporary perspectives, Structure and functioning of civil society organization
- Resource mobilization and fund raising for CSO activities and initiatives, Volunteers: importance, role and participation, Volunteer management – strategies and approaches.
- Corporate Social Responsibility- Concept, meaning, importance, dimensions of CSR. Corporate partnerships for development- impact and analysis.
- Relationships and partnerships of CSOs with government and other stakeholders

### UNIT IV: Civil society: development and democracy

12

- Ideological, socio-economic and legal perspectives – CSOs and people’s movement , state and civil society
- Issues of governance, accountability and transparency in CSOs
- Civil society's contributions to strengthening democracy and improving governance
- Globalisation and civil society – structure and functions

### Suggested Readings:

- Ahluwalia, I; Kanbur, R; Mohanty, P. (2014). *Urbanisation in India: Challenges, Opportunities and the Way Forward*. New Delhi: Sage Publication
- Wit, J. (2016). *Urban Poverty, Local Governance and Everyday Politics in Mumbai*. India :Routledge.
- Korten, D. C. (1990). *Getting to the 21st century: Voluntary actions and global agenda*. Kanatica: Kumarin Press Tosa.
- Mandal, B.N (2012). *Corporate Social Responsibility in India. Global*. Delhi :Vision Publishing House.

- Organisation for Economic Co-operation and Development. (2001) *Cities for citizens:improving metropolitan governance*. France: OECD Publications.
- Rao, C. (2016). *Urban Governance in India*. Kalpaz Publications: New Delhi.
- Raju, K; Ravindra, A; Manasi, S; Smitha, K; Srinivas, R. (2018). *Urban Environmental Governance in India: Browsing Bengaluru*. India : Springer
- Tondon, R and Mohanty, R (2003). *Does civil society matter? Governance in ContemporaryIndia*. New Delhi : Sage Publications.

### Teaching Plan:

- **Week 1:** Urbanisation – meaning, Concept, trends- national and international perspectives, Growth, Structure and characteristics of urban communities
- **Week 2:** Problems of urbanization and urban communities, Management of urban problems, issues and challenges and Socio-legal framework
- **Week 3:** Governance – concept, nature-historical and contemporary perspectives, governance systems and development – linkages and perspectives
- **Week 4:** Urban Governance systems – evolution, growth and approaches, partnerships, strategies and programmes for urban renewal and governance
- **Week 5:** Civil Society – meaning, concept, historical and contemporary perspectives, Structure and functioning of civil society organization
- **Week 6:** Resource mobilization and fund raising for CSO activities and initiatives,
- **Week 7:** Corporate Social Responsibility- Concept, meaning, importance, dimensions of CSR.
- **Week 8:** Volunteers: importance, role and participation, volunteer management – strategies and approaches.
- **Week 9:** Corporate partnerships for development- impact and analysis.Relationships and partnerships of CSOs with government and other stakeholders
- **Week 10:** Ideological, socio-economic and legal perspectives – CSOs and people’s movement
- **Week 11:** State and civil society, issues of governance, accountability and transparency in CSOs
- **Week 12:** Civil society's contributions to strengthening democracy and improving governance, globalisation and civil society – structure and functions

### Facilitating the achievement of Course Learning Outcomes:

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Understand the concept and functioning of civil society.	Classroom discussions,presentation	Review of journal articles,quiz
2	Identify the constraints in the effective performance of civil society	Classroom discussions,participatory tools videos,presentation	Term paper, group exercise ,assignments

3	Deepen the understanding of democracy and governance and its implications for civil society	Presentations,group discussion,discussion on select readings	Participation in group discussion ,case study analysis,quiz
4	Understand measures that stimulate better economic and social development through developing cooperation mechanism between local and national governments.	Discussion on select readings ,presentation ,videos	Term paper, test

### **URBAN GOVERNANCE & CIVIL SOCIETY PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the functioning of civil society, urban local governance structures, mechanism and arrangements facilitating the adoption and implementation of successful policies to meet the challenges of sustainable, safe and equitable urbanisation.

**Course Learning Outcomes:**

Student will be able to-

1. Understand the functioning of civil society.
2. Identify the constraints in the effective performance of civil society
3. Deepen the understanding of democracy and governance and its implications for civil society
4. Understand measures that stimulate better economic and social development through developing cooperation mechanism between local and national governments.

**CONTENTS**

**PERIODS**

**UNIT I**

**12**

- Structure and characteristics of urban communities
- Problems of urbanization and urban communities, Management of urban problems
- Issues and challenges and Socio-legal framework

**UNIT II**

**12**

- Governance systems and development – linkages and perspectives
- Partnerships, strategies and programmes for urban renewal and governance

### UNIT III

12

- Resource mobilization and fund raising for CSO activities and initiatives,
- Volunteers: importance, role and participation, Volunteer management – strategies and approaches.

### Unit IV

12

- CSOs and people's movement, state and civil society
- Issues of governance, accountability and transparency in CSOs

### Suggested Readings:

- Ahluwalia, I; Kanbur, R; Mohanty, P. (2014). *Urbanisation in India: Challenges, Opportunities and the Way Forward*. New Delhi: Sage Publications
- Wit, J. (2016). *Urban Poverty, Local Governance and Everyday Politics in Mumbai*. India :Routledge.
- Fine, R.; Rai, S. (Ed) (1997) *Civil Society and democratic perspectives*. London: FrankCass & Company Ltd.
- Ham, C. ; Duna, E. (Ed) (1996) *Civil Society-Challenging Western Models*. London:Routledge.
- Korten, D. C. (1990). *Getting to the 21st century: Voluntary actions and global agenda*.Kanatica: Kumarin Press Tosa.
- Mandal, B.N. (2012). *Corporate Social Responsibility in India*. Delhi : Global Vision Publishing House.
- Organisation for Economic Co-operation and Development. (2001) *Cities for citizens:improving metropolitan governance*. France: OECD Publications.
- Rao, C. (2016). *Urban Governance in India*. Kalpaz Publications: New Delhi.
- Raju, K; Ravindra, A; Manasi, S; Smitha, K; Srinivas, R. (2018). *Urban Environmental Governance in India: Browsing Bengaluru*. India : Springer
- Tondon, R and Mohanty, R (2003). *Does civil society matter? Governance in ContemporaryIndia*. New Delhi : Sage Publications.

## LIFELONG LEARNING, LIFE SKILLS & DEVELOPMENT THEORY

**Marks : 100**

**Duration: 3 Hrs.**

### Course Objectives:

To understand the framework of Lifelong Learning and gain insight into the relationship between Literacy, Adult Education and Lifelong Learning. Also, to understand the importance of developing lifeskills for adolescents and youth and learn the processes involved.

### Course Learning Outcomes:

Student will be able to-

1. Understand the Conceptual framework of Adult and Lifelong Learning.
2. Gain insight into the relationship between Literacy, Adult Education and Lifelong Learning.
3. Understand the Role of Lifelong Learning in the context of Globalization.
4. Learn the process, methods, techniques, strategies and significance of training as a tool for development of adolescents and youth.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Life learning: Basic concepts and Applications 12**

- Historical Perspective of Adult and Lifelong Learning in India – Pre and Post Independence period.
- Concepts and terminologies related to Lifelong Learning: Andragogy & Pedagogy, Lifelong Learning, Continuing Education, Formal-Education, Non-Formal Education, Incidental Learning, Illiteracy and its forms.
- Indian Adult / Lifelong Learning Programmes: Social Education, Gram Shiksha Mohim, Farmer's Functional Literacy Programme, National Adult Education Programme and National Literacy Mission.

### **UNIT II: Planned Programmes for lifelong learning: National and International Perspectives 12**

- Lifelong Learning and Development - Social, Economic, Political and Cultural. Approaches to Continuing Education / Lifelong Learning in different Five Year Plans.
- Emerging needs and future perspectives of Lifelong Learning.
- Lifelong Learning needs of Industries, Role of NGOs, Zilla Saksharta Samitis, UNESCO declaration of Adult and Lifelong Learning, Hamburg Declaration (1997) and Mumbai Declaration on Role of Higher Education, Bharat Gyan Vigyan Jatha and Literacy House. Trends of Adult & Lifelong Learning in Asia with focus on SAARC Countries.
- Current Initiatives at National Level Saakshar Bharat and International Level

### **UNIT III: Adolescents, Youth and Lifeskills Training 12**

- Life Skills- nature, classification & measurement
- Individual Skills for self identity
- Traditional Family-based skills acquisition processes. Institution-based skills acquisition processes.
- Participatory and Community-based skills acquisition processes
- Principles underlying Life skills Training , Training and Learning Aids., Training Techniques

### **UNIT IV: Developing Componentets for operationalising lifelong learning programmes 12**

- Identification of job competencies
- Designing and implementing a Training programme.
- Use of Technology in Training – Multimedia e-learning, on-line and distance learning. Training Skills & Training System., Methods used in Training

### **Suggested Readings:**

- Armstrong, M. (2007). *A Hand Book of Human Resource Management Practice*. UK : Kogan Page Limited.
- Cropley, A; Dave, R. (2014). *Lifelong Education and the Training of Teachers*. Pergamon press and UNESCO Institute for Education
- Freire, Paulo. (1970). *Pedagogy of the Oppressed*. New York : Continuum.
- J.P. (2005). *Human Resource Development Training of Individual and Organizations*. UK.: Kogan page Publisher,
- Rajesh & Dixit, V.K. (2011). *Lifelong Learning: Issues and Challenges*. New Delhi: Global Book Organization.
- Robert L.C. (1996). *Training and Development Hand Book*. New York: McGraw Hills.
- Roger, Harrison. (Ed.2002). *Supporting Lifelong Education*. London: Rotledge.
- Shah, S. Y. (1993). *Indian Adult Education: A Historical Perspective*. New Delhi: Indian Adult Education Association .
- Singh, Madhu. (Ed.2002). *Lifelong Learning*. Humberg: UNESCO Institute of Lifelong Learning. Wilson,
- Singh, P.N. (1989). *Training for Management Development*. New Delhi: ISTD.
- Swanson E. H. (2001). *Foundation of Human Resource Development*. San Francisco: Berrett Koehler.
- Tony, P. (2003). *Developing Effective Training Skills (from personal insight to organizational performance)*. London : CIPD House.
- W. Keith, D & Longworth, N. (2014). *Lifelong Learning*. UK : Routledge

### **Teaching Plan:**

- **Week 1:** Historical Perspective of Adult and Lifelong Learning in India – Pre and Post Independence period, Concepts and terminologies related to Lifelong Learning: Andragogy & Pedagogy
- **Week 2:** Lifelong Learning, Continuing Education, Formal-Education, Non-Formal Education, Incidental Learning, Illiteracy and its forms.
- **Week 3:** Indian Adult / Lifelong Learning Programmes: Social Education, Gram Shiksha Mohim, Farmer's Functional Literacy Programme, National Adult Education Programme and National Literacy Mission.
- **Week 4:** Lifelong Learning and Development - Social, Economic, Political and Cultural. Approaches to Continuing Education / Lifelong Learning in different Five Year Plans. Emerging needs and future perspectives of Lifelong Learning.
- **Week 5:** Lifelong Learning needs of Industries, Role of NGOs, Zilla Saksharta Samitis, UNESCO declaration of Adult and Lifelong Learning, Hamburg Declaration (1997) and Mumbai Declaration on Role of Higher Education, Bharat Gyan Vigyan Jatha and Literacy House.
- **Week 6:** Trends of Adult & Lifelong Learning in Asia with focus on SAARC Countries. Current Initiatives at National Level Saakshar Bharat and International Level
- **Week 7:** Individual Skills for self identity, Traditional Family-based skills acquisition processes. Institution-based skills acquisition processes.

- **Week 8:** Participatory and Community-based skills acquisition processes, Principles underlying Life skills Training
- **Week 9:** Training and Learning Aids., Training Techniques
- **Week 10:** : Identification of job competencies , Designing and implementing a Training programme.
- **Week 11:** Use of Technology in Training – Multimedia e-learning, on-line and distance learning.
- **Week 12:** Training Skills & Training System., Methods used in Training

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Understand the Conceptual framework of Adult and Lifelong Learning.	Classroom discussions,presentation	Review of journal articles,quiz,assignments
2	Gain insight into the relationship between Literacy, Adult Education and Lifelong Learning.	Classroom discussions,videos, presentation	Term paper, review the given journal article
3	Understand the Role of Lifelong Learning in the context of Globalization.	Presentations,group discussion	Participation in group discussion,review the given journal article,quiz
4	Learn the process, methods, techniques, strategies and significance of training as a tool for development of adolescents and youth.	Discussion on select readings , presentation videos	Participation in group discussion, review a journal article

**LIFELONG LEARNING, LIFE SKILLS & DEVELOPMENT  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To gain insight into the relationship between Literacy, Adult Education and Lifelong Learning. Also, to understand the importance of developing lifeskills for adolescents and youth and learn the processes involved.

**Course Learning Outcomes:**

Student will be able to-

1. Gain insight into the relationship between Literacy, Adult Education and Lifelong Learning.

2. Learn the process, methods, techniques, strategies and significance of training as a tool for development of adolescents and youth.

## CONTENTS

## PERIODS

### UNIT I

12

- Andragogy & Pedagogy, Lifelong Learning, Continuing Education, Formal-Education, Non-Formal Education, Incidental Learning, Illiteracy and its forms.
- Indian Adult / Lifelong Learning Programmes

### UNIT II

12

- Emerging needs and future perspectives of Lifelong Learning.
- Lifelong Learning needs of Industries,
- Current Initiatives at National Level Saakshar Bharat and International Level

### UNIT III

12

- Participatory and Community-based skills acquisition processes
- Principles underlying Life skills Training, Training and Learning Aids., Training Techniques

### UNIT IV

12

- Identification of job competencies
- Designing and implementing a Training programme.
- Use of Technology in Training – Multimedia e-learning, on-line and distance learning. Training Skills & Training System., Methods used in Training

### Suggested Readings:

- Cropley, A; Dave, R. (2014). *Lifelong Education and the Training of Teachers*. Pergamon press and UNESCO Institute for Education
- Freire, Paulo. (1970). *Pedagogy of the Oppressed*. New York : Continuum.
- J.P. (2005). *Human Resource Development Training of Individual and Organizations*. UK.: Kogan page Publisher,
- Rajesh & Dixit, V.K. (2011). *Lifelong Learning: Issues and Challenges*. New Delhi: Global Book Organization.
- Robert L.C. (1996). *Training and Development Hand Book*. New York: McGraw Hills.
- Roger, Harrison. (Ed.2002). *Supporting Lifelong Education*. London: Rotledge.
- Singh, P.N. (1989). *Training for Management Development*. New Delhi: ISTD.
- Swanson E. H. (2001). *Foundation of Human Resource Development*. San Francisco: Berrett Koehler.
- Tony, P. (2003). *Developing Effective Training Skills (from personal insight to organizational performance)*. London : CIPD House.

# **KNOWLEDGE MANAGEMENT AND DIGITAL MARKETING THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

## **Course Objectives:**

To understand the needs and domains of Knowledge Management and explain the importance of digital media channels; planning, implementing and monitoring digital marketing

## **Course Learning Outcomes:**

Student will be able to-

1. Understand the emerging needs of Knowledge Management
2. Understand the role of the essential elements of Digital Marketing
3. Develop a systematic approach in developing Digital Marketing strategies
4. Examine digital communications campaigns and the ways of measuring, monitoring, and evaluating

## **CONTENTS**

## **PERIODS**

### **UNIT I: Knowledge Management 12**

- Components, domains and Process of Knowledge Management
- Strategies of Knowledge Management- Case studies
- Knowledge Management in sectors of health, environment, consumption
- Tools and methods for Knowledge Work(ers)- Knowledge Tools for Individuals, Groups and Organizations · Institutional Support for Knowledge Economies
- Knowledge Management- A way of integrated digital marketing strategy

### **UNIT II :Introduction to Digital Marketing and Search Engine Optimization 12**

- Traditional v. Digital Marketing
- Market Research v. Market Reality
- Search Engine Optimization- Key SEO Concepts: Search Results & Positioning, Benefits of Search Position, Stakeholders in Search, Mechanics of Search
- On-Page Search Engine Optimisation and Off-Page Search Engine Optimisation
- SEO Audit, Tools and Measurement

### **UNIT III –Search Engine Marketing (SEM), Search Media Marketing (SMM) and Web Analytics 12**

- Fundamentals and case studies of SEM
- Creation of Google display network
- Mobile Ad Networks
- Youtube marketing – introduction and AD formats
- Getting Started with Social Media Marketing: Introduction to Social Media
- Creating Content for Social Media: Tools for Content Creation
- Facebook Marketing, Instagram & LinkedIn Marketing, Twitter and Snapchat Marketing,

### Pinterest Marketing

- Creating a Successful Digital Marketing Strategy
- Web Analytics- Google Analytics, Social media analytics, Digital Analytics

## UNIT IV –Digital Marketing Strategy Development and Planning

12

- Digital marketing Assessment, Digital marketing internal assessment, Objective planning, Digital marketing strategy groundwork, Situation Analysis
- Digital Marketing Mix, Strategy roadmap, Digital marketing communication & Channel Mix.
- Digital Marketing operations setup, basics of web development and management
- User experience, usability and service quality elements.

### Suggested Readings:

- Ahuja, V. (2015). *Digital Marketing*. India: Oxford.
- Bhatia, P. (2017). *Fundamentals of Digital Marketing*. New Delhi: Pearson
- Dodson, I. (2016). *The Art of Digital Marketing*. New Jersey: Wiley.
- Jashopara A (2011), *Knowledge Management: An integrated approach, 2ed, Prentice Hall*
- Kartajaya, H., Setwian, I., & Kotler, P (2018). *Marketing 4.0*. New Jersey: Wiley.
- North, K.; Kumta, G. (2014): *Knowledge Management: Value Creation Through Organizational Learning*. Berlin: Springer.
- Probst, G.; Raub & S.; Romhardt, K. (2000): *Managing Knowledge. Building Blocks for Success*. Chichester : Wiley.

### Teaching Plan:

- **Week 1:** Components and domains of Knowledge Management, Process of Knowledge Management
- **Week 2:** Knowledge Management in sectors of health, environment, consumption Strategies of Knowledge Management- Case studies
- **Week 3:** Tools and methods for Knowledge Work(ers)- Knowledge Tools for Individuals, Groups and Organizations · Institutional Support for Knowledge Economies, Knowledge Management- A way of integrated digital marketing strategy
- **Week 4:** Traditional v. Digital Marketing, Market Research v. Market Reality, Search Engine Optimization- Key SEO Concepts: Search Results & Positioning, Benefits of Search Position, Stakeholders in Search, Mechanics of Search
- **Week 5:** On-Page Search Engine Optimisation and Off-Page Search Engine Optimisation, SEO Audit, Tools and Measurement
- **Week 6:** Fundamentals and case studies of SEM, Creation of Google display network Mobile Ad Networks
- **Week 7:** Youtube marketing – introduction and AD formats, Getting Started with Social Media Marketing: Introduction to Social Media
- **Week 8:** Creating Content for Social Media: Tools for Content Creation, Facebook Marketing, Instagram & LinkedIn Marketing, Twitter and Snapchat Marketing, Pinterest Marketing
- **Week 9:** Creating a Successful Digital Marketing Strategy, Web Analytics- Google Analytics, Social media analytics, Digital Analytics

- **Week 10:** Digital marketing Assessment, Digital marketing internal assessment, Objective planning, Digital marketing strategy groundwork, Situation Analysis
- **Week 11:** Digital Marketing Mix, Strategy roadmap, Digital marketing communication & Channel Mix.
- **Week 12:** Digital Marketing operations setup, basics of web development and management, User experience, usability and service quality elements.

**Facilitating the achievement of Course Learning Outcomes:**

<b>Unit .No</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning activity</b>	<b>Assessment tasks</b>
1	Understand the emerging needs of Knowledge Management	Presentation, group discussions	Quiz, assignments
2	Understand the role of the essential elements of Digital Marketing	Presentation, group discussions	Test, case study analysis
3	Develop a systematic approach in developing Digital Marketing strategies	Presentation, videos, visit	Term paper, visit report
4	Examine and the ways of measuring, monitoring, and evaluating	Presentation, select readings related to the topic	Students participation in discussion, content analysis

**KNOWLEDGE MANAGEMENT AND DIGITAL MARKETING  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course objectives:**

To understand the domains of Knowledge Management and digital marketing and to set up objectives with respect to segmentation and targeting of the audience and digital media plan

### Course Learning Outcomes:

Student will be able to-

1. Analysis of Knowledge Management in various sectors
2. Plan and structure Facebook marketing to manage and build brand
3. Integrate the concept of Media Buying & Planning

### CONTENTS

### PERIODS

#### Unti I: Analysis of Knowledge Management in various sectors 12

- Analyse the use of different forms of media for the process of Knowledge Management in various sectors

#### Unti II: Facebook Marketing 18

- Plan and structure Facebook shop to manage and sell more products with Facebook.
- Build your brand with Facebook to connect with people where they are- Facebook and Instagram.
- Facebook Ads - Targeting Audiences, Understanding audience.

#### Unti III: Media Buying & Planning 18

- Setting up the objectives
- Understand the key tasks to draft an “awesome” digital media plan
- Segmentation & targeting of the audience
- Best practice to execute the campaigns post the media plan
- Understanding of multiple formats & appropriate for our targeted digital platforms.

#### Suggested Readings:

- Ahuja, V. (2015). *Digital Marketing*. India: Oxford.
- Bhatia, P. (2017). *Fundamentals of Digital Marketing*. New Delhi: Pearson
- Dodson, I. (2016). *The Art of Digital Marketing*. New Jersey: Wiley.
- Jashopara A (2011), *Knowlegde Management: An integrated approach, 2ed, Prentice Hall*
- Kartajaya, H., Setwian, I., & Kotler, P (2018). *Marketing 4.0*. New Jersey: Wiley.
- North, K.; Kumta, G. (2014): *Knowledge Management: Value Creation Through Organizational Learning*. Berlin: Springer.
- Probst, G.; Raub & S.; Romhardt, K. (2000): *Managing Knowledge. Building Blocks for Success*. Chichester : Wiley.

## CORPORATE COMMUNICATION AND PUBLIC RELATIONS THEORY

Marks : 100

Duration: 3 Hrs.

#### Course Objectives:

To develop skills in communication and PR, applied to corporate management, in institutions of government, commerce and Industry, non- profit agencies and academia.

## Course Learning Outcomes:

Student will be able to-

1. Understand the role and function of corporate communication and public relations.
2. Explore strategies used by corporates to communicate with key stakeholders, including consumers, investors, media and employees.
3. Identify and assess PR strategies and get an overview of how media is used for publicity and building public relations.
4. Understand crisis communication and its relationship to corporate reputation management.

## CONTENTS

## PERIODS

### UNIT I: Core Skills in Corporate Communication

12

- The mass media Industry
- Growth of new media and changing corporate media relations practices
- Corporate Communication: Concepts, Structure and Practice
- Impact of blogs, chat rooms, and Web-based groups on Corporate Communications Practice
- News Reporting
- Research and Research writing

### UNIT II: Crisis Communication

12

- Crisis Communication: functions of organizational communication departments within a corporation
- Design of a corporate communication strategic planning model, value of cost effective communication planning
- Problem solving strategies associated with crisis communication
- Manufacturing consent: Noam Chomsky and the Media
- Group presentations on dealing with corporate communication

### UNIT III: Core Skills in Public Relations

12

- PR: Concepts, Structure and Practice
- The PR Campaign / Strategic PR.
- PR tools: Interpersonal, mass media and selective Media (News release- seven point formula: Press relation, press conference, press briefing, press tours)
- Public Relations vs. Publicity, Public Relations vs. Marketing
- Effective writing for PR
- PR & Media Relations
- Client servicing
- Designing and Measurement of PR Campaigns

### UNIT IV: Foundation skills for Corporate Communication and PR

12

- The making of a PR and Corporate Communication professional
- Effective business communication
- Corporate branding

- PR: Industry , practice and application
- Event management
- Event planning and execution
- New media and Practice

### **Suggested Readings:**

- Argenti, P. A. (2005). *Corporate Communication*. New York: McGraw-Hill.
- Cornelissen, J. (2014). *Corporate Communication: A Guide to Theory and Practice*. Sage Publication
- Balan K.R. (1980). *Public Relation*. New Delhi: S.Chand and Co.
- Oliver, S. (2004). *Handbook of corporate communication and public relations: pure and applied*. UK: Routledge
- Podnar, K. (2015). *Corporate Communication: A Marketing Viewpoint*. Delhi :Routledge Publication
- Seeger, M. W., Sellnow, T. L.; Ulmer, R. R. (2003). *Communication and organizational crisis*. CT: Greenwood Publishing Group

### **Teaching Plan:**

- **Week 1:** The mass media industry, Growth of new media and changing corporate media relationspractices
- **Week 2:** Corporate Communication: Concepts, Structure and Practice, Impact of blogs, chat rooms, and Web-based groups on Corporate Communications Practice
- **Week 3:**News Reporting, Research and Research writing
- **Week 4:** Crisis Communication: functions of organizational communication departments within acorporation
- **Week 5:** Design of a corporate communication strategic planning model, value of cost effective communicationplanning
- **Week 6:** Problem solving strategies associated with crisiscommunication, Manufacturing consent: Noam Chomsky and theMedia
- **Week 7:** Group presentations on dealing with corporatecommunication
- **Week 8:** PR: Concepts, Structure and Practice, The PR Campaign / Strategic PR, PR tools: Interpersonal, mass media and selective Media (News release- seven point formula: Press relation, press conference, press briefing, presstours), Public Relations vs. Publicity, Public Relations vs. Marketing
- **Week 9:** Effective writing for PR, PR & Media Relations, Client servicing, Designing and Measurement of PR Campaigns
- **Week 10:**The making of a PR and Corporate Communication professional, Effective business communication, Corporate branding, PR: Industry, practice and application
- **Week 11:** Event management, Event planning and execution
- **Week 12:** New media and Practice

**Facilitating the achievement of Course Learning Outcomes:**

<b>Unit.No</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning activity</b>	<b>Assessment tasks</b>
<b>1</b>	To study the role and function of corporate communication and publicrelations.	Presentation , discussions, visit	Quiz, visit report, assignments
<b>2</b>	To explore strategies used by corporates to communicate with key stakeholders, including consumers, investors, media andemployees.	Presentation, selected readings,videos	Test, term paper
<b>3</b>	To identify and assess PR strategies and get an overview of how media is used for publicity and building public relations.	Presentation, selected readings,videos	Quiz, content analysis, assignments
<b>4</b>	To understand crisis communication and its relationship to corporate reputation management.	Presentation,select readings related to the topic will be shared	Students participation in discussion will be gauged, assignments

**CORPORATE COMMUNICATION AND PUBLIC RELATIONS  
PRACTICAL****Marks: 50****Duration: 3 Hrs.****Course Objective:**

To develop skills in communication and PR, applied to corporate management, in institutions of government, commerce and Industry, non- profit agencies and academia.

**Course Learning Outcomes:**

Student will be able to-

1. To analyze the various corporate communication case studies.
2. To identify and assess PR strategies and get an overview of how media is used for publicity and building publicrelations.
3. To develop a Media product platform for corporate world

## CONTENTS

## PERIODS

### UNIT I

12

- Analyze the various corporate communication case studies.
- Describe primary target audiences: demographics, psychographics, geographics, behaviors, stages of change

### UNIT II

18

- Understanding the behavioral objectives, knowledge objectives, and goals for various Public relation activities in India and globally
- Developing a plan for monitoring and evaluation of a PR campaign
- Identifying barriers, benefits, the competition and influential factors of PR Campaigns

### UNIT III

18

- Promotion of message: Deciding on messages, messengers, and creating strategies Selecting communication channels
- Crafting a desired positioning and the product for the products

### Suggested Readings

- Argenti, P. A. (2005). *Corporate Communication*. New York: McGraw-Hill.
- Cornelissen, J. (2014). *Corporate Communication: A Guide to Theory and Practice*. New York :Sage Publications.
- Oliver, S. (2004). *Handbook of corporate communication and public relations: pure and applied*. UK: Routledge
- Podnar, K. (2015). *Corporate Communication: A Marketing Viewpoint*. Delhi :Routledge Publication
- Seeger, M. W., Sellnow, T. L.; Ulmer, R. R. (2003). *Communication and organizational crisis*. CT: Greenwood Publishing Group.

## LIVELIHOOD SYSTEMS AND SOCIAL ENTREPRENEURSHIP THEORY

**Marks : 100**

**Duration: 3 Hrs.**

### Course Objectives:

To become aware of the diverse livelihood systems and recognize the aspects influencing their sustainability along with different strategies for enhancing livelihood sustainability.

### Course Learning Outcomes:

Student will be able to-

1. Exposure to diverse livelihood systems and the aspects influencing their sustainability.

2. Understand the different strategies for enhancing livelihoodsustainability.
3. Appreciate the importance of social entrepreneurship and its links with rural development.
4. Understand the process of capacity building for social entrepreneurshipdevelopment.

## CONTENTS

## PERIODS

### **UNIT I: Livelihood Systemsand Opportunities**

**12**

- Livelihood as a concept
- Resources and Assets
- Livelihood systems – global and Indian overview, socio-economic, cultural and historical perspectives andopportunities.
- Urban and Rural Livelihood systems- types, nature, characteristics, issues - Challengesand opportunities
- Gender and Livelihood – prospects and challenges
- Threats to traditional livelihood from globalization, industrilization, migration and climate change.

### **UNIT II: Sustainable livelihood : Concept, Approaches and Avenues**

**12**

- Sustainable Livelihood : Concept
- A Human Rights Based Approach to Sustainable Rural Livelihood Systems
- Linkages between sustainable livelihood systems and development
- Integrating people’s knowledge in sustainable livelihood systems
- Schemes and Programmes for Livelihood sustainability- international and national efforts, government policies, programmes and NGO initiatives.
- Models for sustainable livelihood systems – issues of inclusion, participation, sustainable environment and social impact.

### **UNIT III: Livelihood systems andcapacity building**

**12**

- History and evolution of microfinance and marketing
- Problems of SMEs of formal and informalsector.
- Design and management of capacity building initiatives: thrust, scope, methods and resources.
- Role of training, capacity building, skill development andEDP.
- Issues of credit, assistance, enterprise networking and resource planning ofSMEs
- Best practices in management of successful livelihoodprogrammes.

### **UNIT IV: Rural Development and Social Entrepreneurship**

**12**

- Social entrepreneurship : Concept and Overview
- Need, relevance, scope of Rural Development : Programmes & Schemes.
- Traditional avenues like agri-based, natural resources and craft basedlivelihoods.
- Entrepreneurial ventures – types, nature and scale
- Difference between social and business entrepreneurship
- Social and rural entreprenurship : Challenges and Success Stories across various sectors
- Enterprise planning, launching and up-scalings–issues andperspectives

- Development of Women entrepreneurs – need, characteristics and problems

### **Suggested Readings:**

- Akhouri, M.M.P. (1990). *Entrepreneurship for Women in India*. New Delhi: NIESBUD.
- Bedi, G. ; Shiva, V. (2002) *Sustainable Agriculture and Food security*. New Delhi: Sage Publications.
- Chakravarty, S. (2000) *Development Planning*. New Delhi: Oxford Publishers.
- Halberg, N; Müller, A. (2013). *Organic Agriculture for Sustainable Livelihoods*. New Delhi: Routledge Publication
- Kundu, A. ; Sharma, A.N. (2001). *Informal Sector in India-Perspectives and Policies*. New Delhi: Institute for Human Development.
- Kumar, D; Kabir, Y; James, A. (2016). *Rural Water Systems for Multiple Uses and Livelihood Security*. Elsevier
- Pritchard, B; Rammohan, A; Sekher, M; Parasuraman, S; Choithani, C. (2013). *Feeding India: Livelihoods, Entitlements and Capabilities*. New Delhi: Routledge Publication
- Shylendra, H. & Rani, U. (2005). *Diversification and Sustainable Rural Livelihood: A Study in Semi-arid Villages of Western India*. New Delhi : Concept Publishing Company.
- Muhammad, Y. (2008). *Banker to the Poor : Micro-lending and Battle against World Poverty*. United States : Public Affairs.

### **Teaching Plan:**

- **Week 1:** Livelihood as a Concept, Resources and Assets, Livelihood Systems – global and Indian overview, socio-economic, cultural and historical perspectives and opportunities.
- **Week 2:** Urban and Rural Livelihood systems- types, nature, characteristics, issues - Challenges and opportunities
- **Week 3:** Gender and Livelihood – prospects and challenges, Threats to traditional livelihood from globalization, industrialization, migration and climate change.
- **Week 4:** Sustainable Livelihood : Concept, A Human Rights Based Approach to Sustainable Rural Livelihood Systems
- **Week 5:** Linkages between sustainable livelihood systems and development Integrating people's knowledge in sustainable livelihood systems, Contemporary opportunities for sustainable livelihoods, Technology and sustainable livelihoods.
- **Week 6:** Schemes and Programmes for Livelihood sustainability- international and national efforts, government policies, programmes and NGO initiatives, Models for sustainable livelihood systems – issues of inclusion, participation, sustainability environment and social impact
- **Week 7:** History and evolution of microfinance and marketing Problems of SMEs of formal and informal sector.
- **Week 8:** Role of training, capacity building, skill development and EDP, issues of credit, enterprise networking and resource planning of SMEs, Design and management of capacity building initiatives: thrust, scope, methods and resources.
- **Week 9:** Best practices in management of successful livelihood programmes.
- **Week 10:** Social entrepreneurship : Concept and Overview, Need, relevance, scope of Rural Development : Programmes & Schemes.

- Traditional avenues like agri-based, natural resources and craft based livelihoods.
- **Week 11:** Entrepreneurial ventures – types, nature and scale
  - i. Difference between social and business entrepreneurship
  - ii. Social and rural entrepreneurship : Challenges and Success Stories across various sectors
- **Week 12:** Enterprise planning, launching and up-scalings–issues and perspectives, development of Women entrepreneurs – need, characteristics and problems

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning activity	Assessment tasks
1	Exposure to diverse livelihood systems and the aspects influencing their sustainability	Presentation ,videos	Secondary review exercise, quiz
2	Understand the different strategies for enhancing livelihoods sustainability.	Presentation, readings related to the topic will be shared, case studies	Term paper, case study analysis, assignments
3	Appreciate the importance of social entrepreneurship and its links with rural development.	Presentation, videos, discussions	Open book test, review of journal article
4	Understand the process of capacity building for social entrepreneurship development.	Presentation, select readings ,discussions , visits	Test, critical analysis, field visit report

**LIVELIHOOD SYSTEMS AND SOCIAL ENTREPRENEURSHIP  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To gain practical understanding of the diverse livelihood systems and recognize the aspects influencing their sustainability along with different strategies for social entrepreneurship development.

**Course Learning outcomes:**

Student will be able to-

1. Exposure to diverse livelihood systems and the aspects influencing their sustainability
2. Understand the different strategies for enhancing livelihoods sustainability.

3. Appreciate the importance of social entrepreneurship and its links with rural development.
4. Understand the process of capacity building for social entrepreneurship development.

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT 1</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Sustainable Livelihood Systems: Case Study (Analysis and Documentation)</li> <li>• Visit to Biodiversity Park</li> <li>• Visit to Dilli Haat/ Craft's Museum</li> <li>• Role of SHGs and NGOs</li> </ul>	
<b>UNIT II</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Livelihood options : An overview</li> <li>• Layout of a Plant Nursery</li> <li>• Management of a Plant Nursery</li> <li>• Visit to Kisan Haat</li> </ul>	
<b>UNIT III</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Post Harvest Technology of farm produce</li> <li>• Social entrepreneurship models : Analysis and Critique</li> <li>• Visit to social entrepreneurial sites</li> <li>• Microfinance Opportunities : Analysis and Critique</li> <li>• Visit to Farmer 's Fair</li> </ul>	
<b>UNIT IV</b>	<b>12</b>
<ul style="list-style-type: none"> <li>• Development of social entrepreneurship proposal : Planning, Design and Presentation</li> <li>• Development of Training Programme for social entrepreneurship development.</li> </ul>	

**Suggested Readings:**

- Akhouri, M.M.P. (1990). *Entrepreneurship for Women in India*. New Delhi: NIESBUD.
- Bedi, G. ; Shiva, V. (2002) *Sustainable Agriculture and Food security*. New Delhi: Sage Publications.
- Chakravarty, S. (2000) *Development Planning*. New Delhi: Oxford Publishers.
- Halberg, N; Müller, A. (2013). *Organic Agriculture for Sustainable Livelihoods*. New Delhi: Routledge Publication
- Kundu, A. ; Sharma, A.N. (2001). *Informal Sector in India-Perspectives and Policies*. New Delhi: Institute for Human Development.
- Kumar, D; Kabir, Y; James, A. (2016). *Rural Water Systems for Multiple Uses and Livelihood Security*. Elsevier
- Pritchard, B; Rammohan, A; Sekher, M; Parasuraman, S; Choithani, C. (2013). *Feeding India: Livelihoods, Entitlements and Capabilities*. New Delhi: Routledge Publication
- Shylendra, H. & Rani, U. (2005). *Diversification and Sustainable Rural Livelihood: A Study in Semi-arid Villages of Western India*. New Delhi : Concept Publishing Company.
- Muhammad, Y. (2008). *Banker to the Poor : Micro-lending and Battle against World*

*Poverty.* United States : Public Affairs.

**M.Sc. Resource Management & Design Application**

**Department of Home Science**

**Lady Irwin College**

**University of Delhi**

**Course Credit Structure-CBCS**

**2018**

**Vision:**

The Department strives at empowerment through knowledge and skills towards management of personal, family, community and shared resources for creation of sensitive, aesthetic and sustainable environment.

**Mission:**

The Department strives to build a cadre of professionals in the area of sustainable management of resources and new product development. The courses are pitched at providing a strong theoretical base along with skill enhancement through hands-on training. The curriculum provides experiential training to students for professional and career readiness which enables students to participate in real life projects and develop the right skill set needed in a competitive market scenario.

**Revision of the PG Syllabus:**

In order to develop the course curriculum, the department reached out to its stake holders in different areas. Stakeholders from government and non-government organizations, corporates and alumnae of the department were consulted to strengthen the course and make it more contemporary. The old syllabus was sent to various experts and their inputs were taken. Some of the experts who were consulted are as follows:

1.	Prof. Matt Syal (Chair)	Prof. Construction Management, School of Planning Design and Construction, Michigan State University, USA
2.	Prof. Lalit Das (Co-Chair)	Former Professor, Industrial Design Centre, IIT Delhi
3.	Dr P.C. Jain	Chairman, India Green building Council
4.	Prof. M. M. P. Akhouri	Former Executive Director, NIESBUD
5.	Ms. Seema Arora	Principal and Head CII ITC Centre of Excellence for Sustainable Development
6.	Mr. Sanjay Seth	Senior Director, TERI
7.	Mr. A.K.Tripathi	Director General, National Institute of Solar Energy, Ministry of New and Renewable Energy, Government of India
8.	Dr. Kuldip Chander	Retd. Prof. Building Engineering and Management, SPA
9.	Prof. Kamal Kant Dwivedi	Vice Chancellor, ITM University, Gwalior
10.	Prof. Jatin Bhatt	Director, Ambedkar Institute
11.	Mr. Siddhartha Bhatla / Ms.	Director, Creative Consultant at Archohm Consults Pvt Ltd.
12.	Mr. Naveen Rampal	Freelance designer
13.	Dr. Parag Anand	Head, Industrial Design Department, SPA
14.	Mr. Kamal Pandit	Head, Kitchen appliance and new business team, LG
15.	Mr. Rahul Sadashiv Kumble	Consultant, Pepsico
16.	Mr. Anurag Roy	Architect and Principal, Gateway College of Architecture & Design

17.	Dr. Vijayraghavan Chariar	Assistant Professor, CRDT department, I.I.T Delhi
18.	Dr. Avneesh Singh	Director General, DGFASLI, Mumbai
19.	Dr. Sanchita Jindal	Director, MoEF
20.	Ms. Jayashree Kurup	Head, Content & Research, Magic Bricks
21.	Ms. Arpita Ranjan	Dept. Head, Institute of vocational studies for interior, architecture & design
22.	Ms. Sruthi Samuel	Programme Coordinator, IGNOU
23.	Mr. Pankaj Narain	Consultant (NID), BEEHIVE
24.	Mr. Shyam Sujan	ELCOMA
25.	Mr. George C. Varughese	President, Development Alternatives
26.	Mr. Neeraj Kapoor	Director, Kalpakrit Sustainable Environments Pvt. Ltd.
27.	Mr. B.C. Sabata	Senior Scientific Officer, Department of Environment, Delhi Secretariat
28.	Mr. Raghav Aggarwal	Rotomag Solar, IL&FS Water Ltd., Principal Advisor, Gurgaon, Haryana
29.	Ms. Ranjita Menon	Programme Director, Centre for Science and Environment, New Delhi
30.	Ms. Ranjeeta Buti	Head, Strategic Alliances, Mind Shaper Technologies Pvt. Ltd.
31.	Ms. Mansi Sharma	Executive, Green Building Services, SGS
32.	Ms. Subodhika Vohra	Technical Officer, Carbon Disclosure Project (CDP), India
33.	Ms. Charvi Mehta	Consultant, Ministry of Skill Development and Entrepreneurship, Government of India
34.	Ms. Gagan Preet Kaur	Consultant, National Skill Development Agency, Government of India

### **Programme Objectives:**

- To build a cadre of professionals in the area of sustainable management of resources and new product development.
- To provide a strong theoretical base along with skill enhancement through hands-on training.
- To provide experiential training to students for professional and career readiness which enables students to participate in real life projects and develop the right skill set needed in a competitive market scenario.
- To train students to work in the areas of research, consultancy, programme, design, management and evaluation in various research and social development organizations

### **Programme Specific Outcomes:**

- PSO1: Professional and career readiness through participation in real life projects and develop the right skill set needed in a competitive market scenario.

- PSO2: Enhanced entrepreneurial spirit through sounder management of facilities, marketing, finance and project management.
- PSO3: Proficiency in various computer aided softwares along with design simulation thus giving a professional edge.
- PSO4: Expertise in designing space and products using ergonomic, sustainable, economically and socio-culturally viable solutions with focus on life-cycle assessment approach.
- PSO5: Proficiency in policies, practices and technologies for sustainable use of resources integrated with various dimensions and frameworks of environment management.

## COURSE CREDIT SCHEME

<u>Semester</u>	<u>Core Courses</u>			<u>Elective Course</u>			<u>Open Elective Course</u>			<u>Total Credits</u>
	No. of papers	Credits (L+T/P)	<b>Total Credits</b>	No. of papers	Credits (L+T/P)	<b>Total Credits</b>	No. of papers	Credits (L+T/P)	<b>Total Credits</b>	
I	4	16L+6T/P	<b>22</b>							<b>22</b>
II	5	16L+8 T/P	<b>24</b>				1	2	<b>2</b>	<b>26</b>
III	5	8L+ 8P	<b>16</b>	2	8L+ 4P	<b>12</b>				<b>28</b>
IV	1	4	<b>4</b>	3	12L +6P	<b>18</b>				<b>22</b>
			<b>66</b>			<b>30</b>			<b>2</b>	<b>98</b>

**SEMESTER I**

<b>Number of core courses</b>	<b>Credits in each core course</b>			
<b>Course</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
Core Course 1 RMDACC101: Research Methods	4		1	5
Core Course 2 RMDACC102: Project Management	4	2		6
Core Course 3 RMDACC103: Building Design and Strategies	4	2		6
Core Course 4 RMDACC104: Financial Management & Accountancy	4		1	5
Total credits in core course	22			
<b>Total credits in Semester I</b>	<b>22</b>			

<b>SEMESTER II</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 5 RMDACC205: Statistics & Computer Applications	4	2		6
Core course 6 RMDACC206: Consumer Behaviour & Marketing Management	4	2		6
Core course 7 RMDACC207: Sustainability Reporting & Corporate Social Responsibility	4			4
Core course 8 RMDACC208: Facilities & Services Management	4			4
Core course 9 Integrated Practical RMDACC209: (a) Facilities & Service Management (b) Economic Empowerment of Communities		4 (2+2)		4
Total credits in core course	24			
<b>Number of Open Electives</b>	<b>Credits in each open elective</b>			
	Theory			Credits
Open Elective 1: RMDAOE201: Graphics and communication design RMDAOE202: Entrepreneurship & Innovation	2			2
Total credits in open elective	2			
<b>Total credits in Semester II 26</b>				

<b>SEMESTER III</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 10 RMDACC310: Enterprise Design & Management	4			4
Core course 11 RMDACC311: Visual Merchandising and Display	4			4
Core course 12 Integrated Practical RMDACC312: (a) Enterprise Design & Management (b) Visual Merchandising and Display		4 (2+2)		4
Core course 13 RMDACC313: Internship		2		2
Core course 14 RMDACC314: Technical Writing & Seminar		2		2
Total credits in core course	16			
<b>Number of elective courses</b>	<b>Credits in each Elective course</b>			
Credits in each elective course	Theory	Practical	Tutorial	Credits
RMDAEC301A/B: Elective course 1	4	2		6
RMDAEC302A/B: Elective course 2	4	2		6
Total credits in elective courses	12			
<b>Total credits in Semester III</b>	<b>28</b>			

**Elective Courses: Select any one specialization of the following:**

- **Specialization A: Space & Product Design**  
RMDAEC301A: Product Design & Development  
RMDAEC302A: Advanced Space Design & Ecology
- **Specialization B: Environment Management & Sustainable Development**  
RMDAEC301B: Sustainable Habitat Concept & Practices  
RMDAEC302B: Capacity Building for Sustainable Development

<b>SEMESTER IV</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 15 RMDACC415: Dissertation/Experiential Learning Project		4		4
Total credits in core course	4			
<b>Number of elective courses</b>	<b>Credits in each Elective course</b>			
Credits in each elective course	Theory	Practical	Tutorial	Credits
RMDAEC 403A/B: Elective course 3	4	2		6
RMDAEC404A/B: Elective course 4	4	2		6
RMDAEC405A/B: Elective course 5	4	2		6
Total credits in elective courses	18			
<b>Total credits in Semester IV 22</b>				

**Elective Courses: Select any one specialization of the following:**

- **Specialization A: Space & Product Design**  
RMDAEC403A: Design Clinic & Audit  
RMDAEC404A: Ergonomics: Human factors in Design  
RMDAEC405A: Professional Practices in Design & Start-ups
- **Specialization B: Environment Management & Sustainable Development (any 3)**  
RMDAEC403B: Policies & Practices for Sustainable Development  
RMDAEC404B: Climate Change & Ecosystem: Issues & Concerns  
RMDAEC405B: Health & Safety in Built Environment

# **SEMESTER I**

**SEMESTER I**

<b>Number of core courses</b>	<b>Credits in each core course</b>			
<b>Course</b>	<b>Theory</b>	<b>Practical</b>	<b>Tutorial</b>	<b>Credits</b>
Core Course 1 RMDACC101: Research Methods	4		1	5
Core Course 2 RMDACC102: Project Management	4	2		6
Core Course 3 RMDACC103: Building Design and Strategies	4	2		6
Core Course 4 RMDACC104: Financial Management & Accountancy	4		1	5
Total credits in core course	22			
<b>Total credits in Semester I</b>	<b>22</b>			

# **RESEARCH METHODS THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

## **Course objectives:**

To provide students understandings about the basic concepts, approaches and methods in conducting research thereby enabling them to appreciate and critique the nuances of designing a research study as well the ethical dimensions of conducting researches.

## **Course Learning Outcomes:**

Student will be able to:

1. Demonstrate knowledge of the scientific method, purpose and approaches to research
2. Compare and contrast quantitative and qualitative research
3. Explain research design and the research cycle
4. Prepare key elements of a research proposal
5. Explain ethical principles, issues and procedures

## **CONTENTS**

## **PERIODS**

### **UNIT I: Purpose of research**

**10**

- Definition, objectives and significance of research
- Types of research
- Scientific method: induction and deduction
- Research approaches: quantitative, qualitative and mixed
- Issues of relevance and cultural appropriateness

### **UNIT II: Principles of Research in quantitative and qualitative approaches**

**30**

#### *Research design*

- Meaning and need of research design
- Components and types of research design
- Issues in design construction

#### *Sampling, methods*

- Concept of sampling, key differences in the two approaches
- Sampling methods, sample size and sampling error
- Selecting participants and contexts to examine social phenomenon

#### *Data collection and analyses*

- Methods and measurement: Measurement in research, scales and errors in measurement, reliability and validity of measurement tools
- Methods of data collection and types of data
- Immersion, deep engagement, triangulation and reflexivity in qualitative data collection
- Data management and quality control
- Transcription in qualitative data analyses
- Errors in inference – Bias and confounding, reliability and validity issues
- Ensuring reliability and validity in qualitative research

### UNIT III: The Research Cycle

12

- Systematic literature review and referencing
- Formulating a research problem –Developing research questions and objectives, exploring research context/phenomenon
- Identifying variables, constructing hypotheses
- Deciding research approach and design
- Selection of sample/participants, choice of methods and analysis.
- Writing a research report-Styles and format.

### UNIT IV: Values, Social Responsibility and Ethics in Research

8

- Ethical principles guiding research: from inception to completion and publication of research
- Ethical issues relating to research participants and the researcher
  - Rights, dignity, privacy and safety of participants
  - Informed consent, confidentiality anonymity of respondents, voluntary participation, harm avoidance
  - Conflicts of interest or bias, Use of inappropriate research methodology, Incorrect reporting, misuse of information

#### Teaching Plan:

**Week 1:** Definition, objectives and significance of research

**Week 2:** Types of research, Scientific method: induction and deduction

**Week 3 :** Research approaches: quantitative, qualitative and mixed. Issues of relevance and cultural appropriateness

**Week 4:** Meaning and need of research design; types of research design, issues in design construction

**Week 5:** Concept of sampling, key differences in the two approaches, Selecting participants and contexts to examine social phenomenon

**Week 6:** Sampling methods, Sample size and sampling error

**Week 7:** Measurement in research, scales and errors in measurement, reliability and validity of measurement tools

**Week 8:** Methods of data collection and types of data, Immersion, deep engagement, triangulation and reflexivity in qualitative data collection

**Week 9:** Data management and quality control; Transcription in qualitative data analyses

**Week 10:** Errors in inference – Bias and confounding, reliability and validity issues; Ensuring reliability and validity in qualitative research

**Week 11:** Research Cycle and writing research report

**Week 12:** Ethics in Research

#### Facilitating the achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Demonstrate knowledge of the scientific method, purpose and approaches	Unit transaction through power point presentations	Assignments, Open book test

	to research.		
2.	Compare and contrast quantitative and qualitative research	Unit transaction through power point presentations and classroom discussion about review and critique of journal articles	Quizzes and objective test
3.	Explain research design and the research cycle	Unit transaction through power point presentations and classroom discussion using research case studies	Assignments, Open book test
4.	Prepare key elements of a research proposal	Unit transaction through power point presentations Students to develop a live research project in groups	Assignments, Open book test Assessment of live project
5	Explain ethical principles, issues and procedures	Unit transaction through power point presentations and classroom discussion about research proposals	Class assignments and quizzes

### Suggested Readings:

- Aschengrau A, Seage III GR. (2014) *Essentials of Epidemiology in Public Health*. (Third Edition). Sudbury, MA: Jones & Bartlett.
- Bell, J. (1999). *Doing your research project: Guide for first time researchers in social sciences*. New Delhi: Viva Books.
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, CA.: Sage.
- Blaxter, L. Hughes, C., & Tight, K. (1999). *How to research*. New Delhi: Viva Books.
- Bryman, A. (2008). *Social research method*. Oxford: Oxford University Press.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.
- Denscombe, M. (1999). *The good research guide for small-scale social research projects*. New Delhi: Viva Publications.
- Denzin, N. and Lincoln, Y. (Eds.) 2005. *The Sage handbook of qualitative research*. London: Sage.
- Kerlinger, F. N, & Lee, H. B. (2000). *Foundations of behavioral research*. Belmont, Calif.: Wadsworth.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier
- Miles, M. & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. London: Sage.
- Rothman K. (2002) *Epidemiology – An Introduction*. New York. NY: Oxford University Press.

# PROJECT MANAGEMENT THEORY

**Marks: 100**

**Duration: 3 Hrs.**

## **Course Objectives:**

The purpose of this course is to introduce students to the world of projects and to projects' real life struggles and challenges. It will broadly cover the operational and conceptual issues faced by modern project managers. At the end of this course, students should be able to develop, execute, and control a basic project plan.

## **Course Learning Outcomes:**

After completing this course, students will:

1. Understand the role of the project manager in an organization, and ways of structuring organizations to manage projects
2. Understand the range, scope, and complexity of modern projects
3. Develop a strategic, system perspective on the management of projects
4. Learn to apply modern project management tools and techniques

## **CONTENTS**

## **PERIODS**

### **UNIT I: Introduction to Project Management**

**8**

- Project Selection
- Measuring Project Success

### **UNIT II: The Project Manager**

**10**

- Role and Negotiation
- Ethics
- Conflict management

### **UNIT III: Project Organization**

**15**

- Planning, Budgeting
- Cost Estimation
- Risk management

### **UNIT IV: Project Monitoring and control**

**15**

- Scheduling
- Resource Allocation
- Leveling
- Auditing and Termination

## **Suggested Readings:**

- A guide to the Project Management Body of Knowledge- PMBOK Guide-Fourth Edition, American National Standard, ANSI/PMI99-001-2008
- Project Management-Prasanna and Chandra, Tata McGraw Hill
- Elements of Project Management, Pete Spinner, Prentice Hall, USA

- Project Management: A Managerial Approach, 9th Edition by Jack R. Meredith, Samuel J. Mantel, Jr. and Scott M. Shafer ISBN 9781119071983 ©2015 (M&M)
- A Guide to the Project Management Body of Knowledge, 5th Edition by the Project Management Institute (PMI) 2013. ISBN: 9781935589679

**Teaching Plan:**

**Week 1:** Project Selection

**Week 2:** Measuring Project Success

**Week 3:** The Project Manager - Role and Negotiation

**Week 4:** Ethics

**Week 5:** Conflict management

**Week 6:** Planning, Budgeting

**Week 7:** Cost Estimation

**Week 8:** Risk management

**Week 9:** Scheduling

**Week 10:** Resource Allocation

**Week 11:** Leveling

**Week 12:** Auditing and Termination and Revision

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Understand the role of the project manager in an organization, and ways of structuring organizations to manage projects	Unit transaction through power point presentations	Assignments, Open book test
2	Understand the range, scope, and complexity of modern projects	Unit transaction through power point presentations Students to work on a live research project in groups	Class assignments and quizzes
3	Develop a strategic, system perspective on the management of projects	Unit transaction through power point presentations and classroom discussion using case studies	Class assignments and quizzes
4	Learn to apply modern project management tools and techniques	Unit transaction through power point presentations and classroom discussion	Class assignments and quizzes

# **PROJECT MANAGEMENT PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs**

## **Course Objectives:**

This course is designed to deepen the student's ability to use various project management tools for planning, controlling and monitoring a project. A set of instruments for risk analysis and decision making under uncertainty, a simulation program for managing projects, are used throughout the course, allowing students to get familiar with industry tools for managing project risk.

## **Course Learning Outcomes:**

After completing this course, the student will be able to:

1. Build project portfolio selection models.
2. Identify and analyze project risks and develop contingency plans for those risks.
3. Analyze the impact of variability in project tasks and plans.
4. Select the most appropriate resources to maintain the schedule and budget of a project.

## **CONTENTS**

## **PERIODS**

**UNIT I:** Decision tools

**UNIT II:** Project selection: EMV, Precision Tree

**UNIT III:** Portfolio optimization

**UNIT IV:** Schedule risk

**UNIT V:** Cost risk

**UNIT VI:** Cost management: time/cost trade-off

**UNIT VII:** Resource management: resource allocation, resource leveling

## **Suggested Readings:**

- Horine, G. (2012). Project Management Absolute Beginner's Guide (3rd Edition)
- Project Management: A Systems Approach to Planning, Scheduling, and Controlling 11th Edition by Harold Kerzner
- Guide to Project Management: Getting it right and achieving lasting benefit Hardcover – February 4, 2013 by Paul Roberts
- Strategic Project Management Made Simple: Practical Tools for Leaders and Teams Hardcover – February 9, 2009 by Terry Schmidt

# **BUILDING DESIGN & STRATEGIES THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

## **Course Objectives:**

This course focuses on providing in-depth understanding about concepts, processes and techniques pertaining to planning and design of buildings. It takes into account both conventional and contemporary methods of design and explores the best design practices employed for designing comfortable spaces.

## **Course Learning Outcomes:**

After completing this course, students will be able to:

1. Identify the basic concepts pertaining to planning & design of buildings
2. Learn application of building bye-laws in designing buildings
3. Discover prudent use of conventional and contemporary building materials
4. Use resource efficient methods and techniques for building design and enhancing occupants' comfort
5. Understand human habitation as part of the eco-system
6. Develop a holistic understanding of human settlements and their socio-cultural aspects
7. Adapt traditional knowledge systems & vernacular architecture for optimizing building efficiency

## **CONTENTS**

## **PERIODS**

### **UNIT I: Understanding concepts in Space planning and Design**

**12**

- Site selection & orientation of buildings
- Structural components of a building terminology with respect to climatology construction: foundation, floor, roof, columns, beam, walls, doors & windows, partitions & paneling, staircase, false ceiling
- Understanding building sustainability with respect to economic, physical, environmental and social components
- Latest building bye-laws & codes of practice: NBC and MPD
- Physical Planning and Zoning- concept of land use, zoning and neighborhood

### **UNIT II: Building Resources**

**20**

- Building Materials
  - Lifecycle assessment of building materials: Waste minimization through processes of reduction, recovery, recycling, reuse, storage and disposal of construction waste, evaluation criteria for eco-friendly building materials and its use
  - Environmental impact of building materials
- Resource efficiency
  - Resource efficiency of building materials
  - Indices of indoor comfort
  - Passive building design
  - Energy efficient building design techniques (HVAC, energy efficient lighting systems, water efficient systems)

### **UNIT III: Understanding Human Settlements and Designing for Human Adaptation 16**

- Concept and characteristics of human settlements
- Factors impacting human settlements and its ecology
- Socio-cultural aspects of human settlement
- Sociology of housing and settlement structure
- Traditional building structures, knowledge systems and techniques
- Vernacular architecture: local materials and resources

#### **Suggested Readings:**

- Kumar, S. (2010). *Building construction* (20th ed.). New Delhi, India: Standard and Distributors. (Unit 1)
- *National Building Code of India*. (2016). Bureau of Indian Standards. (Unit 1)
- Neufert, Ernst. *Architect's Data*. 3rd ed., Blackwell Publishing, 2008. (Unit 1 & 2)
- Punmia, B. C., Jain, A. K., & Jain, A. K. (2008). *Building Construction* (10th ed.). New Delhi, India: Laxmi Publications. (Unit 1)
- Tipnis, A. (2012). *Vernacular Traditions: Contemporary Architecture*. The Energy and Resources Institute. (Unit 3)
- Varghese, P. C. (2015). *Building materials* (2nd ed.). New Delhi: PHI Learning Private Limited. (Unit 2)

#### **Teaching Plan:**

**Week 1:** Unit 1: Application of concepts in Space planning and Design, Site selection and building orientation, Structural components terminology: foundation, floor

**Week 2:** Unit 1: Application of concepts in Space planning and Design, Structural components terminology: roof and ceiling, walls, doors, Understanding building sustainability

**Week 3:** Unit 1: Application of concepts in Space planning and Design, Latest building bye-laws & codes of practice: NBC and MPD, Physical Planning and Zoning- concept of land use, zoning and neighborhood

**Week 4:** Unit 2: Building Resources, Lifecycle assessment of building materials: Waste minimization through processes of reduction, recovery, recycling, reuse, storage and disposal of construction waste, evaluation criteria for eco-friendly building materials and its use

**Week 5:** Unit 2: Building Resources, Evaluation criteria for eco-friendly building materials and its use, Environmental impact of building materials

**Week 6:** Unit 2: Building Resources, Resource efficiency of building materials, Indices of indoor comfort

**Week 7:** Unit 2: Building Resources, Passive building design, Energy efficient building design techniques

**Week 8:** Unit 2: Building Resources, HVAC, Daylight and energy efficient lighting

**Week 9:** Unit 3: Designing for Human Adaptation, Concept and characteristics of human settlements, Factors impacting human settlements and its ecology

**Week 10:** Unit 3: Designing for Human Adaptation, Socio-cultural aspects of human settlement, Sociology of housing and settlement structure

**Week 11:** Unit 3: Designing for Human Adaptation, Traditional building structures, knowledge systems and techniques

**Week 12:** Unit 3: Designing for Human Adaptation, Vernacular architecture: local materials and resources

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching & Learning Activity	Assessment Tasks
I	<ul style="list-style-type: none"> <li>• Identify the basic concepts pertaining to planning &amp; design of buildings</li> <li>• Learn application of building bye-laws in designing buildings</li> </ul>	<p>Classroom lectures and power-point presentations will be the primary teaching mode for understanding basic concepts in building design and application of building bye-laws.</p>	<p>Short assignment on structural components of a building</p> <p>Quiz on latest building bye-laws</p>
II	<ul style="list-style-type: none"> <li>• Discover prudent use of conventional and contemporary building materials</li> <li>• Use resource efficient methods and techniques for building design and enhancing occupants' comfort</li> </ul>	<p>Classroom lectures and power-point presentations will be used for understanding use of conventional and contemporary building materials and resource efficiency.</p> <p>Students will also be shown different building materials accompanied by discussions for their identification, properties and use</p>	<p>Test on resource efficiency</p> <p>Spotting and Quiz for identification of building materials</p>
III	<ul style="list-style-type: none"> <li>• Understand human habitation as part of the eco-system</li> <li>• Develop a holistic understanding of human settlements and their socio-cultural aspects</li> <li>• Adapt traditional knowledge systems &amp; vernacular architecture for optimizing building efficiency</li> </ul>	<p>Classroom lectures and power-point presentations will be used for understanding the basics of designing for human adaptation.</p> <p>Videos will be shown to the students to educate them about human settlements and vernacular architecture</p> <p>Students will also be taken on field to give them hands-on exposure</p>	<p>Case study assignment on different types of human settlements and their socio-economic aspects</p> <p>Short assignment on traditional knowledge systems &amp; vernacular architecture</p>

# **BUILDING DESIGN & STRATEGIES**

## **PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

This practical focuses on development of presentation and layout plans for identifying various resources and designing efficient spaces. It also explores the integration of traditional design techniques with contemporary methods for creating comfortable living spaces.

### **Course Learning Outcomes:**

After completing this course student will be able to:

1. Construct resource maps of different areas
2. Draft layout plans and elevations
3. Evaluate use of traditional and contemporary building materials
4. Generate case-profiles of settlement structures & energy efficient buildings
5. Develop a project on vernacular architecture

### **CONTENTS**

### **PERIODS**

#### **UNIT 1: Drafting layout plans & elevations** **24**

- Understanding dimensioning through use of metric and architectural scale
- Understanding master plans, zoning and neighborhood plans: Resource Mapping
- Constructing layout plan & elevation of residential interior spaces

#### **UNIT 2: Case Profiling** **12**

- Case profile of settlement structures (modern and traditional) to study socio-cultural aspects
- Case profile of energy efficient construction technologies and high performance buildings

#### **UNIT 3: Survey: Building Materials** **6**

- Assessing conventional and contemporary building materials in terms of their identification, costing, characteristics, resource efficiency, environmental impact and application
- Survey on energy efficient building materials

#### **UNIT 4: Project** **6**

- Exploring best practices and knowledge systems of vernacular architecture and generating drawings of its varied components

### **Suggested Readings:**

- Hall, M. (2016). *Materials for Energy Efficiency and Thermal Comfort in Buildings*. S.L.: Woodhead.
- *Master plan for Delhi: With the perspective for the year 2021*. (2007). New Delhi: Rupa & Co.
- Punmia, B. C., Jain, A. K., & Jain, A. K. (2008). *Building Construction* (10th ed.). New Delhi, India: Laxmi Publications.
- Tipnis, A. (2012). *Vernacular Traditions: Contemporary Architecture*. The Energy and Resources Institute.

- Varghese, P. C. (2015). *Building materials* (2nd ed.). New Delhi: PHI Learning Private Limited.

## **FINANCIAL MANAGEMENT & ACCOUNTANCY THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To provide basic knowledge regarding multiple accounting and financial aspects to students.

### **Course Outcomes:**

1. Knowledge about principles and techniques of accounting information for decision-making and control
2. Acquire skills in the use of tools, techniques and processes of financial management in the realm of financial decision-making

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Introduction to financial accounting and financial management**

**10**

- Concept, nature, and scope of financial accounting
- Financial accounting – generally accepted accounting principles (GAAP)
- Accounting process and system- journal, ledger & trial balance
- Cost accounting and Management accounting
- Objectives, nature and scope of financial management

#### **Unit II: Financial Statements & tools of financial analysis**

**15**

- Nature, functions & limitations of various financial statements
- Preparations of Profit and Loss accounts and Balance sheets
- Long term Assets and Depreciation / Inventory
- Tools of financial analysis: Fund flow analysis and Cash flow analysis, Ratio analysis, Cost volume profit (break-even) analysis, Analysis of operating and financial leverages

#### **Unit III: Cost accounting**

**15**

- Costing fundamentals: Cost concepts & classifications, Materials, Direct Labor and Direct Expenses, Overheads general, Overheads Distributions
- Costing for Specific Industries: Single or Output costing, Job, Batch and Contract costing, Process Costing, Operating costing
- Costing for Control: Budgetary control, Standard costing & Variance analysis, Marginal costing & Cost volume profit analysis

#### **UNIT IV: Financial planning**

**20**

- Raising long term funds: Planning capital structure, Internal financing, Issue of bonus shares, Rights Shares, Rights Debentures, Capital Budgeting, Cost of Capital
- Managing short term finance: Management of Working capital, Management of Inventories

### **Suggested Readings:**

- Horngren, Charles T. (2001) Introduction to Management Accounting. New Delhi: Prentice hall of India Private Ltd
- Kimmel. P.D, (2000) Financial Accounting: Tools for Business Decisions Making. New York: John Wiley & Sons
- Anthony, A. (2001) Management Accounting. London: Prentice Hall
- Damodaran, Awasthi, Corporate Finance: Theory and Finance, New York: John Wiley
- Chandra, Prasanna. (2001) Financial Management: Theory and Practice. New Delhi: Tata McGraw Hill Publishing
- Tulsian P. C (2008). “Financial Accounting”, Pearson Education Narayanswami.
- Financial Accounting (2004) “A Managerial Perspective”, PHI, 2nd Edition
- Mukherjee (2009) “Financial Accounting for Management “, TMH, 1st Edition.
- Ramchandran and Kakani (2007)” Financial Accounting for Management” ,TMH , 2nd Edition.
- Ghosh T P (1998) “Accounting and Finance for Managers”, Taxman, 1st Edition.
- Maheshwari S.N and Maheshwari S K (2007) “An Introduction to Accountancy”, Vikas, 9th Edition.
- Ashish K. Bhattacharya (2007) “Essentials of Financial Accounting”, PHI, New Delhi.

### **Teaching Plan:**

**Week 1:** Unit I: Introduction to financial accounting and financial management, Concept, nature, and scope of financial accounting, Financial accounting – generally accepted accounting principles (GAAP)

**Week 2:** Unit I: Introduction to financial accounting and financial management, Accounting process and system- journal, ledger& trial balance, Cost accounting and Management accounting, Objectives, nature and scope of financial management, Unit II: Financial Statements & tools of financial analysis, Nature, functions & limitations of various financial statements

**Week 3:** Unit II: Financial Statements & tools of financial analysis, Preparations of Profit and Loss accounts and Balance sheets, Long term Assets and Depreciation / Inventory

**Week 4:** Unit II: Financial Statements & tools of financial analysis, Tools of financial analysis: Fund flow analysis, Cash flow analysis, analysis of operating and financial leverages

**Week 5:** Unit II: Financial Statements & tools of financial analysis, Ratio analysis, Cost volume profit (break-even) analysis

**Week 6:** Unit II: Financial Statements & tools of financial analysis, Analysis of operating and financial leverages

**Week 7:** Unit III: Cost accounting, Costing fundamentals: Cost concepts & classifications, Materials, Direct Labor and Direct Expenses, Overheads general, Overheads Distributions

**Week 8:** Unit III: Cost Accounting, Costing for Specific Industries: Single or Output costing, Job, Batch and Contract costing, Process Costing, Operating costing

**Week 9:** Unit III: Cost Accounting, Costing for Control: Budgetary control

**Week 10:** Unit III: Cost Accounting, Standard costing & Variance analysis, Marginal costing & Cost volume profit analysis

**Week 11:** Unit IV: Financial planning, Raising long term funds: Planning capital structure, Internal financing, Issue of bonus shares, Rights Shares, Rights Debentures, Capital Budgeting, Cost of Capital

**Week 12:** Unit IV: Financial planning, Managing short term finance: Management of Working capital, Management of Inventories

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching & Learning Activity	Assessment Tasks
I and II	After the completion of this course the students will have knowledge about principles and techniques of accounting information for decision-making and control.	Classroom lectures and Power-point presentations will be the primary teaching mode for understanding basic concepts	Test on understanding of Accounts/financial concepts.
III and IV	Acquire skills in the use of tools, techniques and processes of financial management in the realm of financial decision-making	Classroom lectures and power-point presentations will be use.	Assignment on application of Financial management tools.

## **SEMESTER II**

<b>SEMESTER II</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 5 RMDACC205: Statistics & Computer Applications	4	2		6
Core course 6 RMDACC206: Consumer Behaviour & Marketing Management	4	2		6
Core course 7 RMDACC207: Sustainability Reporting & Corporate Social Responsibility	4			4
Core course 8 RMDACC208: Facilities & Services Management	4			4
Core course 9 Integrated Practical RMDACC209: (a) Facilities & Service Management (b) Economic Empowerment of Communities		4 (2+2)		4
Total credits in core course	24			
<b>Number of Open Electives</b>	<b>Credits in each open elective</b>			
	Theory			Credits
Open Elective 1: RMDAOE201: Graphics and communication design RMDAOE202: Entrepreneurship & Innovation	2			2
Total credits in open elective	2			
<b>Total credits in Semester II 26</b>				

**STATISTICS AND COMPUTER APPLICATIONS  
THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

**Course Learning Outcomes:**

Student will be able to-

1. Differentiate between the qualitative and quantitative methods of analysis of data
2. Suitably apply data reduction strategies and illustrate data using various graphical methods
3. Use appropriate parametric and non parametric statistical tests
4. Draw conclusions and interpretations from the analysis of data using various statistical softwares

**CONTENTS**

**PERIODS**

**UNIT I: Introduction to statistics**

**4**

- Basic principles and concepts in statistics
- Orientation to qualitative and quantitative research procedures
- Measurement and computation- Scales of measurement, Reliability and validity

**UNIT II: Organisation and presentation of data**

**10**

- Qualitative and quantitative data- Coding & data reduction strategies
- Organisation of Data: Frequency distributions vs. thematic analysis
- Percentage, percentile ranking and frequencies
- Univariate, bivariate and multivariate tables
- Graphic representation: Graphs, diagrams and charts

**UNIT III: Descriptive Statistics**

**6**

- Applications of descriptive statistics
- Measures of Central tendency and Variability

**UNIT IV: Probability and normal distribution**

**12**

- Basic principles and applications of probability
- Normal curve
- Characteristics of distributions: Skewness, kurtosis
- Testing hypotheses: Levels of significance and p values
- Errors in hypothesis testing: Type I, Type II
- Sampling distribution
- Standard scores, calculation and application

**UNIT V: Statistical tests**

**12**

- Concept of parametric and non-parametric tests, statistical tests and level of

measurement

- Parametric tests of difference: T test, ANOVA and post hoc analysis of significance
- Parametric tests of association: Pearson's product moment r
- Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis
- Non-parametric tests of association: Spearman's r
- Chi-square test
- Regression and its applications
- Tests for ascertaining reliability of instruments

#### **UNIT VI: Analysis and interpretation**

**4**

- Guidelines for selecting an appropriate test
- Interpreting results- Statistical inference
- Research Conclusion and recommendations

#### **Suggested Readings:**

- Agresti, A. & Franklin C.A. (2009) *Statistics: The Art and Science of Learning from Data* ( Second Edition) Boston,MA: Pearson Prentice Hall, ISBN 978-0-13-513199-2
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage.
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.
- Diez, D. M., Barr, C. D., Cetinkaya-Rundel M. (2015). *OpenIntro Statistics*:((Third Edition). CreateSpace Independent Publishing Platform. ISBN-10: 194345003X, ISBN-13: 978-1943450039 <http://www.openintro.org/stat/textbook.php>.
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Fowler, F.J. (1988). *Survey Research Methods. Applied Social Research Methods Series, Vol. 1*. Newbury Park, CA: Sage.
- Greene, S. and Hogan, D. (Eds.). (2005). *Researching Children's Experiences: Methods and Approaches*. London: Sage.
- Gordis L. (2013) *Epidemiology*. (Fifth Edition). Philadelphia, PA: Saunders Elsevier,
- Minium, E. W., King, B. M., & Bear, G. (1995/2004). *Statistical Reasoning for Psychology and Education*. New York: Wiley and Sons.
- Muijs, D. (2004). *Doing Quantitative Research in Education with SPSS*. London: Sage.

#### **Teaching plan:**

**Week 1:** Basic principles and concepts in statistics, Orientation to qualitative and quantitative research procedures, Scales of measurement, Reliability and validity

**Week 2:** Qualitative and quantitative data- Coding and data reduction strategies, Organisation of Data: Frequency distributions vs. thematic analysis

**Week 3:** Percentage, percentile ranking and frequencies, Univariate, bivariate and multivariate tables

**Week 4:** Graphic representation: Graphs, diagrams and charts, Applications of descriptive statistics

**Week 5:** Measures of Central tendency and Variability

**Week 6:** Basic principles and applications of probability ,Normal curve

**Week 7:** Characteristics of distributions: Skewness, kurtosis,Testing hypotheses: Levels of significance and p values

**Week 8:** Errors in hypothesis testing: Type I, Type II,sampling distributionstandard scores, calculation and application

**Week 9:** Concept of parametric and non-parametric tests, statistical tests and level of Measurement, Parametric tests of difference: T test, ANOVA and post hoc analysis of significance

**Week 10:** Parametric tests of association: Pearson’s product moment r, Non-parametric tests of difference: Mann-Whitney, Sign, Median, and Kruskal-Wallis

**Week 11:** Non-parametric tests of association: Spearman’s r,Chi-square test,Regression and its applications,Tests for ascertaining reliability of instruments

**Week 12:** Guidelines for selecting an appropriate test, Interpreting results- Statistical inference, Research Conclusion and recommendations

### **Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understand the basic concepts, theories and methods in statistics and Differentiate between the qualitative and quantitative methods of analysis of data	Unit transaction through power point presentations,	Assignments, Open book test
2.	Suitably apply data reduction strategies and illustrate data using various graphical methods	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test
3.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
4.	Learn basic statistical procedures for research	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
5	Use appropriate parametric and non-parametric statistical tests	Unit transaction through power point presentations and classroom discussion	Class assignments and quizzes
6	Draw conclusions and interpretations from the analysis of data	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test

## **STATISTICS AND COMPUTER APPLICATIONS PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

To understand the basic concepts, theories and methods in statistics, learn basic statistical procedures for research and understand applications of statistical techniques for analysis and interpretation

### **Course Learning outcomes:**

Student will be able to-

1. Identification of various types of data measurement tools/tests/procedures and understanding the concept of standardisation and reliability and validity.
2. Application of various data reduction and coding methods on quantitative and qualitative data.
3. To be able to organise the data and effectively use appropriate quantitative and qualitative statistical softwares for analysis of data
4. Draw conclusions and interpretations from the analysed data and write reports.

## **CONSUMER BEHAVIOUR & MARKETING MANAGEMENT THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

The objective of the course is to impart an understanding of the conceptual framework, scope and importance of marketing management, macro and micro environment of organisations and their role in coping with changing market scenario. Further the course will increase the knowledge base of students regarding- importance and techniques of market research and forecasting, understanding consumer behaviour, dealing with competition in the market and managing marketing communication.

### **Course Learning Outcomes:**

After completing this course, students will:

1. Develop an understanding of the importance and scope of marketing
2. Understand the changing macro and micro environment of organizations and importance of market research and forecasting
3. Understand consumer behaviour and importance of creating customer value
4. Develop an understanding of the competitive strategies in marketing
5. Understanding the role of marketing communication and its effectiveness

## **CONTENTS**

## **PERIODS**

### **UNIT I: Understanding Marketing Management**

**8**

- Importance and scope of marketing
- Company orientations towards markets and marketing
- Adapting marketing to new economy
- Marketing Management tasks

**UNIT II: Capturing marketing insights** **10**

- Gathering information and scanning the environment
- Analyzing the macro environment (demographic, economic, technological, political, legal, social, cultural)
- Conducting market research
- Forecasting and demand measurement
- New product development-challenges and process

**UNIT III: Consumer Behaviour** **10**

- Understanding consumer behavior, Factors influencing consumer behaviour
- Consumer Adoption Process-stages and factors influencing
- Buying decision process- five stage model
- Creating customer value, satisfaction and loyalty
- Cultivating customer relationships
- Segmenting consumer markets, market targeting

**UNIT IV: Dealing with Competition** **10**

- Identify and analyse competitors , competitive strategies for marketing
- Building strong brands- creating brand equity, brand positioning, differentiation strategies
- Product life-cycle marketing strategies
- Shaping market offerings, developing brand strategies, meeting customer satisfaction
- Product classifications, product and brand relationship
- Characteristics of services, marketing strategies for service firms, Managing service quality, differentiating services

**UNIT V: Marketing communication** **10**

- Role of marketing communication, designing effective marketing communication
- Deciding on the marketing communication mix
- Managing mass communication: Advertising, sales promotions and public relations
- Developing and managing advertising programmes
- Deciding on media and measuring effectiveness
- Managing Personal Communication: direct marketing and personal selling

**Suggested Readings:**

- Kotler P, Keller K.L., Koshy A, Jha M. (2006) *Marketing Management A South Asian, Perspective*, Pearson Education.
- Michael, J. E., Bruce, J. W. and Williom, J. S. (13th Edition, 2004). *Marketing Management*. Tata McGrawHill, New Delhi.
- Kotler, P. (2004) *Marketing Management 11th ed.* Pearson Education.
- Kotler, P. (2004) *Principles of Marketing. 11th ed.* Pearson Education.
- Schiffman, LG. and Kanuk, L.L, (1994) *Consumer Behavior*. New Delhi: Prentice Hall
- Consumer Behavior by Leon G Schiffman, Leslie lazar Kanuk and S. Ramesh Kumar, 10th edition, Pearson Publications

**Teaching Plan:**

**Week 1:** Importance and scope of marketing, Company orientations towards marketplace, Adapting marketing to new economy

**Week 2:** Marketing Management tasks, Gathering information and scanning the environment

**Week 3:** Analyzing the macro environment (demographic, economic, technological, political, legal, social, cultural), Conducting market research

**Week 4:** Forecasting and demand measurement, New product development-challenges and process, Understanding consumer behavior, Factors influencing consumer behaviour

**Week 5:** Consumer Adoption Process-stages and factors influencing, Buying decision process-five stage model, Creating customer value, satisfaction and loyalty, Cultivating customer relationships

**Week 6:** Segmenting consumer markets, market targeting, Identify and analyse competitors

**Week 7:** Competitive strategies for marketing, Building strong brands- creating brand equity, brand positioning, differentiation strategies

**Week 8:** Product life-cycle marketing strategies, Shaping market offerings, Developing brand strategies, meeting customer satisfaction

**Week 9:** Product classifications, product and brand relationship, Characteristics of services, marketing strategies for service firms, Managing service quality, differentiating services

**Week 10:** Role of marketing communication, Designing effective communications, Deciding on the Marketing communication mix

**Week 11:** Managing mass communications: Advertising, sales promotions and public relations, Developing and managing advertising programmes

**Week 12:** Deciding on media and measuring effectiveness, Managing Personal Communications: direct marketing and personal selling, Revision

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Develop an understanding of the importance and scope of marketing	Unit transaction through power point presentations	Assignments, Open book test
2	Understand the changing macro and micro environment of organizations and importance of market research and forecasting	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test
3	Understand consumer behaviour and importance of creating customer value	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
4	Develop an understanding of the competitive strategies in marketing	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
5	Understanding the role of	Unit transaction through	Class assignments and

	marketing communication and its effectiveness	power point presentations and classroom discussion	quizzes
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## CONSUMER BEHAVIOUR & MARKETING MANAGEMENT PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

The objective of the course is to impart an understanding of the practical aspects of marketing management including designing market research strategy and tools, analysis of brand building tools used by industry, case studies of competitive strategies used in marketing and assessment of online marketing website and consumer experiences.

### **Course Learning Outcomes:**

After completing this course, students will be able to:

1. Design and develop market research proposals for specific industry needs- assessing the market for new product launch, product feedback, comparative assessment, and so on
2. Learn through Case study approach the marketing strategies used by large, medium and small companies with emphasis on marketing mix used, marketing budgets, media use, creating customer value and cultivating customer relationships
3. Critically analyze and compare marketing strategies of competing brands, tools used by them for brand building and generating brand equity and suggest suitable strategies to be followed by market followers to become leaders
4. Understand the key features of online retailing websites and their features, customer experience and satisfaction

## **CONTENTS**

## **PERIODS**

### **UNIT I: Market research proposals**

**15**

Developing market research proposals on consumer buying behaviour, effect of promotional schemes on consumer purchase, consumer satisfaction and opinion regarding selected products/brands/marketing strategies, online purchasing etc.

### **UNIT II: Case studies**

**8**

Using Case study approach (using both secondary and primary data) to develop an understanding of marketing strategies used by large, medium and small companies with emphasis on marketing strategies, marketing mix used, marketing budgets, media use, creating customer value and cultivating customer relationships

### **UNIT III: Brand comparison**

**15**

Brand comparisons of products and services in terms of their marketing strategies, tools used by them for brand building and generating brand, find out their strengths and weaknesses and suggest suitable marketing strategies to increase their market share.

### **UNIT IV: E-commerce**

**10**

E-commerce – Assessment and critical analysis of online retailing websites with focus on

visibility, user interface, experience, ease of transaction etc. Further, to develop an e-tailing prototype.

### **Suggested Readings:**

- Marketing Insights from A to Z: 80 Concepts Every Manager Needs to Know by Philip Kotler (2003)
- Marketing Management, Philip Kotler, Kevin Keller, Pearson, New Delhi, 15th edition 2016, ISBN:978-81-317-3101-7
- Marketing Management, Philip Kotler, Kevin Lane Keller, Abraham Koshy, Mithileshwar Jha, 14th Edition, 2013, Pearson Education
- Marketing, Baines, Fill, Sinha and Page, Oxford University Press, New Delhi, Asian Edition, 2013, ISBN: 0-19-807944-3
- Principles of Marketing, Philip Kotler, Gary Armstrong, Prafulla Y Agnihotri and Eshan Ul Haque, Pearson, New Delhi, 13th edition 2011, ISBN:978-81-317-3101-7

## **SUSTAINABILITY REPORTING & CORPORATE SOCIAL RESPONSIBILITY THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

The course aims to create an understanding about the need and benefits of sustainability reporting for businesses, measuring and monitoring sustainability performance, and details of sustainability standards, indices and guidelines. Further it will equip students with approaches, policy perspective and practices for CSR. Industry norms, potential business benefits, stakeholder influence with regard to CSR will be an important aspect of the course.

### **Course Learning Outcomes:**

After completing this course, students will:

1. Understand the history, need and benefits of sustainability reporting for businesses
2. Know how to monitor and measure sustainability performance
3. Know about sustainability standards, indices and reporting guidelines
4. Develop an understanding of the scope, approaches, policy and procedure of Corporate Social Responsibility (CSR)

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Introduction to sustainable reporting**

**10**

- Sustainability and business, triple bottom line approach to business
- Financial and non-financial disclosures, need and benefits of sustainability reporting
- Tools for stakeholder communication and sustainability performance

#### **UNIT II: Monitoring and measuring sustainability performance**

**10**

- Define sustainability, policy and procedures of sustainability management
- Measuring, monitoring and improving performance
- Establishing indicators

### **UNIT III: Sustainability standards, indices and reporting** **10**

- GRI framework-disclosure, regulation, performance indicators; UN Global compact; CDP; OECD guidelines for multinational corporations etc.
- Prerequisites for sustainability report- structure, stakeholder engagement, indicator development, materiality assessment information; writing the report, verification and assurance of the report

### **UNIT IV: Sustainability reporting in India** **8**

- Current and future trends, role of regulators, institutional framework, stakeholder engagement
- Sustainability reporting guidelines for PSUs, national voluntary guidelines, sustainability reporting by corporate sector

### **UNIT V: CSR in India** **10**

- Introduction, definition, approaches, importance, scope, history, concept and consumer perspective to CSR
- Policy, practices and Initiatives for CSR, legal and economic perspective, theories, Industry Norms
- Potential Business benefits, Criticism and concerns, Stakeholder Influence
- Global and Indian Scenario with Case studies

#### **Suggested Readings:**

- Singh, Triple Bottom Line Reporting and Corporate Sustainability, PHI learning, 2006.
- C.V. Baxi and Ropmanjari Sinha Roy. Corporate Social Responsibility, 2011, Vikas Publishing House, New Delhi.
- Rogers, Jalal & Boyd: An Introduction to Sustainable Development, PHI Learning, 2007
- Ahluwalia, J. S. (2015). *Environmental Governance for Sustainability* in Ahluwalia, J. S. (Editor), *Environmental Governance: Transition to a Green Economy*, New Delhi, IOD Publishing
- James, Paul with Magee, Liam, Scerri, Andy, and Steger, Manfred B. (2015) *Urban Sustainability in Theory and Practice: Circles of Sustainability*, London, Routledge
- Nielsen (2015), *The Nielsen Global Survey of Corporate Social Responsibility and Sustainability*, Oxford, Nielsen

#### **Teaching Plan:**

**Week 1:** Sustainability and business, triple bottom line approach to business, Financial and non-financial disclosures, need and benefits of sustainability reporting

**Week 2:** Tools for stakeholder communication and sustainability performance

**Week 3:** Define sustainability, policy and procedures of sustainability management

**Week 4:** Measuring, monitoring and improving performance, Establishing indicators

**Week 5:** GRI framework-disclosure, regulation, performance indicators; UN Global compact; CDP; OECD guidelines for multinational corporations etc.

**Week 6:** Prerequisites for sustainability report- structure, stakeholder engagement, indicator development, materiality assessment information; writing the report, verification and assurance of the report

**Week 7:** Current and future trends, role of regulators, institutional framework, stakeholder

engagement

**Week 8:** Sustainability reporting guidelines for PSUs, national voluntary guidelines, sustainability reporting by corporate sector

**Week 9:** CSR in India: Introduction, definition, approaches, importance, scope, history, concept and consumer perspective to CSR

**Week 10:** Policy, practices and Initiatives for CSR, legal and economic perspective, theories, Industry Norms

**Week 11:** Potential Business benefits, Criticism and concerns, Stakeholder Influence

**Week 12:** Global and Indian Scenario with Case studies, Revision and clarification of doubts

### **Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Understand the history, need and benefits of sustainability reporting for businesses	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
2	Know how to monitor and measure sustainability performance	Unit transaction through power point presentations, classroom discussion, case studies	Quizzes and objective test
3	Know about sustainability standards, indices and reporting guidelines	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test
4, 5	Develop an understanding of the scope, approaches, policy and procedure of Corporate Social Responsibility (CSR)	Unit transaction through power point presentations, classroom discussion, case studies	Quizzes and objective test

## **FACILITIES AND SERVICES MANAGEMENT THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

This course focuses on providing understanding of the concept and need for management of services and facilities to maintain the work areas and maintain efficiency in core areas of work of

an organization. It covers the operations and maintenance of facilities with respect to soft and engineering services.

**Course Learning Outcomes:**

After completing this course, students will be able to:

1. Comprehend various aspects of facilities maintenance and services, materials and accessories in indoor and outdoor environment.
2. Understand the systems-operations management, quality control and project review techniques.
3. Develop competence among students for professional practice in management of facilities

**CONTENTS**

**PERIODS**

**UNIT I: Basics of Services and Facilities Maintenance**

**12**

- Concept & need for management of facilities and services
  - Preventive maintenance& predictive maintenance
  - Statutory compliances: Licenses
- Role of a facility manager
- Modern cleaning materials, techniques and equipment
- Maintenance of interior & exterior surfaces including critical area identification for:
  - Walls and ceilings; Doors, windows, cupboards and cabinets; Floor covering and floorings; Furniture; Accessories; Furnishings: upholstery, curtains and draperies, blinds; Kitchen work areas; Laundry; Washrooms; Maintenance of common / public spaces

**UNIT II: Operation & Maintenance of Facilities & Services**

**15**

- Process of operations, in-sourcing & outsourcing O&M
- Soft services
  - Coordination of housekeeping services: maintenance and upkeep
  - Help desk and knowledge base
  - Visitor management system
  - Asset management
  - Work order management, time and attendance system
  - Inventory management
  - Work flow management
  - Property management, space helpdesk, energy dashboard, BAS (building automation system) / BMS (building management system) integration, mail room services, project management,
  - Vendor procurement management, facility management system
  - SLA (service level agreement) management
  - Tenant billing system
- Engineering Services: Efficient operation and maintenance
  - Electrical –LT panel, Lighting fixtures, energy conservation in lighting
  - HVAC: air-conditioning&heating system, electric consumption and efficiency, air quality with respect to occupancy ratio

- Plumbing system: quality of potable water, water treatment plant (RO), water supply system - hydro-pneumatic, pumps for bore-wells, sump-pits, water analysis
- Waste disposal methods and techniques – sewage treatment plant (STP), Affluent treatment plant (ATP), solid waste management
- Safety & security services: fire prevention & control system (wet and dry), CCTV cameras, automated control monitoring systems

### **UNIT III: Techniques for Management of Facilities and Services**

**12**

- Information systems
  - Data management and monitoring
  - Software/technologies for maintenance of interiors
- Project management and review techniques
- Professional practice in facilities management
  - Taking orders, understanding needs and details
  - Creating maintenance plans, budgets and costing / proposals & tenders
  - Implementation and monitoring the plan of work
- Quality specifications
  - ISO specifications
  - SIPOC tool for design and review of a process
- Futuristic facility management

### **Unit IV: Maintenance of indoor and outdoor plants**

**9**

- Selection of indoor and outdoor ornamental plants
- Landscaping components, styles of gardens
- Maintaining gardens: care of plants

### **Suggested Readings:**

- Wiggins, JaneM. (2010). Facilities Manager's desk reference, ISBN: 978-1-1444-32047-3, Wiley-Blackwell
- ISO/TC 267. (2018). *Facility management, International Standards Organization*
- *Construction Products in India. (2007). The issues, the potential and the way ahead, CCPS (Confederation of Construction and Services): New Delhi.*
- *Manchanda et, al. (1999). Household Materials –A Manual for Care and Maintenance, Phoenix Publishing House: New Delhi.*
- Editors of Consumer Guide. (1980). *Plumbing Repairs Made Easy.* Illinois: International Publications Ltd.
- Brooker, G. (2017). The interiorscape: Amalgams and composites. *Palgrave Communications, 3, 1705.*
- *Journal of Facilities Management, ISSN: 1472-5967, Emerald Insight*
- *International Journal of Facility Management, Elsevier*
- *Journal of Facility Management, ISSN: 1472-5967, Online from: 2002, Emerald Publishing House*
- *Facilities Engineering Journal, Orangetap & Association for Facilities Engineering's (AFE)*
- *Facilities Manager Magazine, Published by APPA*

**Teaching Plan:**

**Week 1:** Unit I - Concept & need for management of facilities and services, Modern cleaning materials, techniques and equipment

**Week 2:** Unit I - Application and Maintenance of interior & exterior surfaces including critical area identification for: Walls and ceilings, Doors, windows, cupboards and cabinets, Floor covering and floorings, Furniture, Accessories, Furnishings: upholstery, curtains and draperies, blinds, Kitchen work areas, Laundry, Washrooms, Maintenance of common / public spaces

**Week 3:** Unit I - Preventive maintenance & predictive maintenance, Statutory compliances: licenses

**Week 4:** Unit II - Process of operations, Coordination of housekeeping services: maintenance and upkeep, Electrical –LT panel, Lighting fixtures, energy conservation in lighting, efficient O & M of electrical equipment

**Week 5:** Unit II - HVAC: efficient O & M of air-conditioning & heating system, electric consumption and efficiency, air quality with respect to occupancy ratio, O & M of Plumbing system: quality of potable water, water treatment plant (RO), water supply system - hydro-pneumatic, pumps for bore-wells, sump-pits, water analysis

**Week 6:** Unit II - O & M of waste disposal methods and techniques – sewage treatment plant (STP), Affluent treatment plant (ATP), solid waste management, O & M of safety & security services: fire prevention & control system (wet and dry), CCTV cameras, automated control monitoring systems

**Week 7:** Unit III - Information systems: Data management and monitoring, Software/technologies for maintenance of interiors, Project management and review techniques, Professional practice in facilities management: Taking orders, understanding needs and details

**Week 8:** Unit III - Professional practice in facilities management (cont.): Creating maintenance plans, budgets and costing / proposals & tenders, Implementation and monitoring the plan of work, Quality specifications: ISO specifications, SIPOC tool for design and review of a process

**Week 9:** Unit IV - Understanding Interiorscaping, Selection of indoor and outdoor ornamental plants

**Week 10:** Unit IV - Landscaping components, styles of gardens

**Week 11:** Maintaining gardens: care of plants

**Week 12:** Revision

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching & Learning Activity	Assessment Tasks
I	<ul style="list-style-type: none"> <li>Gaining knowledge about the concept of faculties – Application, management and its importance</li> <li>Understanding application and maintenance of of Interior &amp; Exterior Services</li> <li>Developing an understanding of the</li> </ul>	<p>Classroom teaching including lecture method and power-point presentation.</p> <p>Introduction to various materials and their properties first hand.</p>	<p>Term test</p> <p>Case study of two organizations with examples of successful and unsuccessful management of facilities (based on secondary research)</p> <p>Term paper on materials</p>

	concept of preventive maintenance and predictive maintenance	Field visits to organizations	used for surfaces and cleaning methods and techniques
II	<ul style="list-style-type: none"> <li>Understanding the process of operations and maintenance of facilities</li> </ul>	<p>Classroom teaching including lecture method, group discussion and power-point presentation.</p> <p>Visit to various facilities to observe their Operations and Maintenance.</p>	<p>Case profile of O &amp; M of one organization (primary research) to study their facilities.</p> <p>Preparation of a Facilities maintenance plan keeping in mind all the variables.</p>
III	<ul style="list-style-type: none"> <li>Gaining knowledge about the information systems (data management and technologies)</li> <li>Acquiring professional creating maintenance plans, taking orders, budgeting and monitoring of the whole system.</li> <li>Gaining knowledge of ISO specification and SIPOC Tool.</li> </ul>	<p>Classroom teaching including lecture method and power-point presentation.</p> <p>Secondary research using books and internet will be used to supplement classroom learning.</p> <p>Classroom teaching</p> <p>Making a plan using SIPOC tool</p>	<p>Term Test</p> <p>Visit to organization to understand their operation and maintenance of facilities</p> <p>SIPOC tool assessment</p>
IV	<ul style="list-style-type: none"> <li>Understanding plant terminology</li> <li>Cultivation and maintenance of both indoor and outdoor plants</li> <li>Developing an understanding about various landscaping components and styles of gardens</li> </ul>	<p>Classroom teaching including lecture method and power-point presentation.</p> <p>Field visits and primary research / observation to supplement classroom teaching</p>	<p>Field survey to identify different types of gardens and landscaping components.</p> <p>Portfolio on plant (Indigenous, hybrid, genetically modified, indoor, etc) varieties.</p>

**FACILITIES AND SERVICES MANAGEMENT, ECONOMIC EMPOWERMENT OF  
COMMUNITIES  
INTEGRATED PRACTICAL**

**Marks: 100**

**Duration: 6 Hrs.**

**Course Objectives:**

The practical will assist in developing knowledge about composition, properties and finishes of various materials used in daily life and their care and maintenance. It will concentrate on preparing maintenance plans for a facility with emphasis on HVAC, indoor comfort and human health.

The purpose of the course is to explore community development approaches to local economic development. In this course, students explore marginalized communities. Students investigate community growth and program planning in order to develop marginalized community-based programs.

**Course Learning Outcomes:**

After completing this course, students will be able to:

1. Assess requirements, methods and techniques for maintenance of different facilities & services.
2. Able to execute professional projects for management of facilities & services including operations management, quality control and project review techniques.
3. Understand opportunities for marginalized community growth
4. Analyze marginalized community needs
5. Identify the elements of project in creating community change
6. Develop community program for Economic Empowerment

**CONTENTS**

**PERIODS**

**UNIT I: FACILITIES AND SERVICES MANAGEMENT**

- **Assessing scope of work for maintenance & management of facilities & services** **8**
  - Survey of different finishes on surfaces of walls, ceilings and floors, doors and windows, furniture, furnishings and accessories. Analyze methods and mechanisms for cleaning and maintenance of facilities
  - Case Studies for critical evaluation of maintenance of individual and public areas with respect to services and facilities such as residences (rural and urban); institutional / Government / NGO / Corporate; hotels and restaurants; hospitals; gymnasiums, health clubs and sports complexes; exhibitions and conferences
- **Maintenance Plans** **24**
  - Lighting design, energy audit of lighting design
  - Maintenance plans for specific facility
  - Preparing detailed plans for-
    - a. Operations and maintenance of soft services & engineering services
    - b. Maintenance of facilities and services using project review techniques such as SIPOC
- **Maintenance of plants** **6**
  - Maintenance of indoor and outdoor plants: cutting, budding, layering, grafting
  - Creating miniature gardens for indoor and outdoor surroundings

- **Professional Practice** **10**
  - Detailed plan for maintenance of facilities management with respect to -
    - a. Taking orders, detailed checklist of requirements
    - b. Creating maintenance plan, budget proposals & tenders
    - c. Implementation and monitoring plan of work

## **UNIT II: ECONOMIC EMPOWERMENT OF COMMUNITIES**

- **Community and community growth** **8**
  - Detailed demographic and socio-economic profile of a community
- **Need Assessment and Analysis** **8**
  - Case study of selected communities: operations, networks, skill, challenges
- **Interviews of Business Owners and Employers** **8**
  - Detailed analysis of interviews of business stakeholders about their economic challenges, opportunities, and visions for their communities
- **Program planning** **24**
  - Exploring opportunities for community empowerment
  - Proposal for district theme and specific community economic empowerment intervention that would address the economic challenges faced by the target community

### **Suggested Readings:**

- Wiggins, JaneM. (2010). *Facilities Manager's desk reference*, ISBN: 978-1-1444-32047-3, Wiley-Blackwell
- ISO/TC 267. (2018). *Facility management*, International Standards Organization
- Magee, G. H. (1998). *Facilities maintenance management*. Kingston, MA: R.S. Means
- Garcia-Diaz, A. & Smith, J. M. (2008). *Facilities planning and design*. Upper Saddle River, NJ: Pearson Prentice Hall.
- T Fediw, K. (2015). *The manual of interior plantscaping: A guide to design, installation, and maintenance*. Portland, OR: Timber Press.
- *Journal of Facilities Management*, ISSN: 1472-5967, Emerald Insight
- Kapila, U. (2009). *Indian Economy since Independence* (19<sup>th</sup> Ed.). Academic Foundation.
- Kemp, R.; Zijderwijk, L.; Weaver, P.; Seyfang, G.; Avelino, F.; Strasser, T.; Becerra, L.; Backhaus, J. & Ruijsink, S. (2015). *Doing things differently: Exploring transformative social innovation and its practical challenges* (TRANSIT Brief ; 1)
- Kretzmann, J.P., & McKnight, J.L. (1993). *Building communities from inside out: A path toward finding and mobilising community assets*. ACTA Publications.
- Mazumdar, D. & Sarkar, S. (2009). *The employment problem in India and the phenomenon of the missing middle*. *Indian Journal of Labour Economics*.
- Rhonda, P. & Pittman, R.H. (2009). A framework for community and economic development. In Rhonda, P. & Pittman, R.H (Eds.), *An introduction to community development*. New York: Routledge.
- Schaffer, R., Deller, C.S., & Marcouiller, W. D. (2004). *Community economics: Linking theory and practice*. Blackwell Publishing.
- Singer, H. (1970). Dualism Revisited: A New Approach to the Problems of Dual Society in Developing Countries. *Journal of Development Studies* 1, pp. 60-1.

- Temali, M. (2002). The community economic development handbook: Strategies and tools to revitalize your neighborhood. Amherst H. Wilder Foundation.
- Ministry of Information and Broadcasting e-book on Major Initiatives.
- Government of India, Economic Survey (latest)
- Government of India, Five Year Plan (latest)
- Government of India, Finance Commission Report (latest)

## **GRAPHICS AND COMMUNICATION DESIGN THEORY**

**Marks: 50**

**Duration: 2 Hrs.**

### **Course Objectives:**

This course will provide information on process of communication design from theory to practice. This course integrates graphic design as a contemporary communication process.

### **Course Learning Outcomes:**

After completing this course, students will be able to:

1. Define and interpret visual communication through design
2. Understand the design principles as they apply to visual communication.
3. Use simple graphic design tools like type, color, illustration as they apply to print media

## **CONTENTS**

## **PERIODS**

### **UNIT 1: Communication Design: Theory to Practice**

**4**

- Theory and practice of communication design.
- Introduction to digital design: Powerpoint, Word & Excel
- Effective presentation: Eye catching design and effective delivery (Creating ideas, displaying data, using visual elements, creating movement).

### **UNIT II: Introduction to Graphic Design**

**12**

- Definition, introduction, concept, history and scope of graphic design
- Graphic design process. Different stages of simplification of design
- Principles and elements of graphic design
- Delivering the message. Print media and society : Newspaper and magazines
- Information Design: Television graphics, website, environmental design (signage, exhibition space, advertising).
- Designing brand identity: logotype, signature, color and presentation.
- Creating touchpoints: Business cards, website, advertisement, letter heads, envelop design, invitation cards, packaging etc.

### **UNIT III: Typography & Illustration**

**8**

- Typography and its power for expressive qualities
- Typography as image
- Understanding of letter (anatomy, size, screen fonts, logotypes), text (spacing, alignment, kerning, hierarchy) and grid (golden section, types of grids).
- Illustration (Illustration in scientific papers: Figures, tables)

- Relative use of type, graphics, illustration and photography in print media
- Graphic design knowledge required for catalogues, brochures, book covers, advertisements which involve print media.

### **Suggested Readings:**

- Ambrose, G., & Harris, P. (2008). *The fundamentals of graphic design*. UK: AVA Publishing.
- Baines, P. & Haslam, A. (2002). *Type and Typography*. London : Laurence King.
- Duarte, N. (2008). *Slide: Ology: The art and science of creating great presentations*. CA: O' Reilly Media.
- Jorge, F. (2005). *Communication design: Principles, methods and practice*. New York : Allworth press.
- Lupton, E. & Phillips, J.C. (2015). *Graphic design: The new basics* (2nd Ed., revised). New York : Chronicle Books.
- Lupton, E. (2010). *Thinking with Type* (2<sup>nd</sup> revised ed.). New York : Princeton Architectural Press.
- Resnick, E. (2003). *Design for communication: Conceptual graphic design basics*. New Jersey: John Wiley & Sons.
- Reynolds, G. (2011). *Presentation zen: Simple ideas on presentation design and delivery*. Berkely, CA: New Riders.
- Wheeler, A. (2012). *Designing brand identity: An essential guide for the whole branding team* (4<sup>th</sup>ed). Hoboken, New Jersey: John Wiley & Sons.

### **Teaching Plan:**

**Week 1:** Unit I: Communication Design: Theory to Practice - Theory and practice of communication design, Introduction to digital design: Power point, Word & Excel

**Week 2:** Unit I: Communication Design: Theory to Practice - Effective Presentation: Eye catching design and effective delivery (Creating ideas, displaying data, using visual elements, creating movement)

**Week 3:** Unit II: Introduction to Graphic Design - Definition, introduction, concept, history and scope of graphic design

**Week 4:** Unit II: Introduction to Graphic Design - Graphic design process. Different stages of simplification of design

**Week 5:** Unit II: Introduction to Graphic Design - Principles and elements of graphic design, Delivering the message. Print media and Society – Newspaper and Magazines

**Week 6:** Unit II: Introduction to Graphic Design - Information Design: Television graphics, website, environmental design (signage, exhibition space, advertising).

**Week 7:** Unit II: Introduction to Graphic Design - Designing brand identity: logotype, signature, color and presentation

**Week 8:** Unit II: Introduction to Graphic Design - Creating touch points: business cards, website, advertisement, letter heads, envelop design, invitation Cards, packaging etc.

**Week 9:** Unit III: Typography& Illustration - Typography and its power for expressive qualities, Typography as image, Understanding of letter (anatomy, size, screen fonts, logotypes), text (spacing, alignment, kerning, hierarchy) and grid (golden section, types of grids).

**Week 10:** Unit III: Typography & Illustration - Illustration: (Illustration in scientific papers: Figures, tables)

**Week 11:** Unit III: Typography& Illustration - Relative use of type, graphics, illustration and photography in print media

**Week 12:** Unit III: Typography& Illustration - Graphic design knowledge required for Catalogues, brochures, book covers, advertisements which involve print media

**Facilitating Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching & Learning Activity	Assessment Tasks
I	<ul style="list-style-type: none"> <li>Define and interpret visual communication through design</li> <li>Understand the design principles as they apply to visual communication.</li> </ul>	Unit transaction through power point presentations, classroom discussion and educational videos.	Test and class assignment
II	<ul style="list-style-type: none"> <li>Use simple graphic design tools like type, color, illustration as they apply to print media</li> </ul>	Unit transaction through power point presentations, classroom discussion and educational videos.	Class assignment and objective test

**ENTREPRENEURSHIP & INNOVATION  
THEORY**

**Marks: 50**

**Duration: 2 Hrs.**

**Course Objectives:**

The purpose of this course is to develop an entrepreneurial mind set and gain insights about the critical role of creativity and innovation to the development of new products and services in entrepreneurial start-ups.

**Course Learning Outcomes:**

After completing this course, students will:

1. Develop an entrepreneurial mind set
2. Ideate an innovative business proposition
3. Create business plans for a start-up or an existing organization

**CONTENTS**

**PERIODS**

**UNIT I:** Entrepreneurship and the Entrepreneurial process - developing the Entrepreneurial Perspective, Stimulating Creativity; Creative Teams **5**

**UNIT II:** Sources of Innovation in Business; Managing Organizations for Innovation and Positive Creativity **5**

**UNIT III: Business Modeling and New Venture Creation: 8**

- Identifying a problem or market opportunity
- Process of launching a new venture, in a corporate setting or as a new start-up
- Developing business models, forming a team, analyzing markets, financing, assessing the competitive environment, and talent acquisition.

**UNIT IV: Strategies for New Venture Growth; 6**

- The Valuation Challenge in Entrepreneurship
- Exit strategies for a New Venture and Trends in India
- Intrapreneurship in Action

**Suggested Readings:**

- Roy, R. (2008) Entrepreneurship. New Delhi: Oxford University Press.
- Chesbrough, H. (2006). Open business model: How to thrive in the new innovation landscape. Harvard Business School Press.
- Drucker, P. F. (2006). Innovation and entrepreneurship: Practice and principles. USA: Elsevier.
- Fagerberg, J., Mowery, D. C., & Nelson, R. R. (Ed.). (2006). The Oxford Handbook of innovation. New Delhi: Oxford University Press.
- Kaplan, J. M. (2006). Patterns of entrepreneurship. John Wiley & Sons.
- CN Prasad, Small and Medium Enterprises in Global Perspective, New century Publications, New Delhi

**Teaching Plan:**

**Week 1:** Entrepreneurship and the Entrepreneurial process - developing the Entrepreneurial Perspective

**Week 2:** Stimulating Creativity; Creative Teams

**Week 3:** Sources of Innovation in Business

**Week 4:** Managing Organizations for Innovation and Positive Creativity

**Week 5:** Identifying a problem or market opportunity

**Week 6:** Process of launching a new venture, in a corporate setting or as a new start-up

**Week 7:** Developing business models

**Week 8:** Forming a team, analyzing markets, financing, assessing the competitive environment, and talent acquisition

**Week 9:** The Valuation Challenge in Entrepreneurship

**Week 10:** Exit strategies for a New Venture and Trends in India

**Week 11:** Intrapreneurship in Action

**Week 12:** Revision and clarification of doubts

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1, 2	Develop an entrepreneurial mind set	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test

3	Ideate an innovative business proposition	Unit transaction through power point presentations, classroom discussion, case studies, ideation activities	Quizzes and objective test
4	Create business plans for a start-up or an existing organization	Unit transaction through power point presentations, classroom discussion, business plan development	Assignments, Open book test

## **SEMESTER III**

<b>SEMESTER III</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 10 RMDACC310: Enterprise Design & Management	4			4
Core course 11 RMDACC311: Visual Merchandising and Display	4			4
Core course 12 Integrated Practical RMDACC312: (a) Enterprise Design & Management (b) Visual Merchandising and Display		4 (2+2)		4
Core course 13 RMDACC313: Internship		2		2
Core course 14 RMDACC314: Technical Writing & Seminar		2		2
Total credits in core course	16			
<b>Number of elective courses</b>	<b>Credits in each Elective course</b>			
Credits in each elective course	Theory	Practical	Tutorial	Credits
RMDAEC301A/B: Elective course 1	4	2		6
RMDAEC302A/B: Elective course 2	4	2		6
Total credits in elective courses	12			
<b>Total credits in Semester III</b>	<b>28</b>			

**Elective Courses: Select any one specialization of the following:**

- **Specialization A: Space & Product Design**  
RMDAEC301A: Product Design & Development  
RMDAEC302A: Advanced Space Design & Ecology
- **Specialization B: Environment Management & Sustainable Development**  
RMDAEC301B: Sustainable Habitat Concept & Practices  
RMDAEC302B: Capacity Building for Sustainable Development

# ENTERPRISE DESIGN & MANAGEMENT THEORY

**Marks: 100**

**Duration: 3 Hrs.**

## **Course Objectives:**

This course is designed with a specific purpose: to nurture innovative and entrepreneurial mind-set. The course imparts essential knowledge and skills on how to start one's own business venture and the various facets that influence successful set up and operations.

## **Course Learning Outcomes:**

After completing this course, students will:

1. Scan innovative and high-potential commercial opportunities
2. Drive innovation and business development
3. Understand the dynamics of enterprise management

## **CONTENTS**

## **PERIODS**

### **UNIT I: Innovation and Entrepreneurship**

**8**

- Understanding, exploring, and applying innovation-related concepts
- Principles and practices involved with new venture creation

### **UNIT II: Emerging Trends, Technology, and Innovation**

**10**

- Emerging trends and disruptors in technology and industry that create new markets and influence decision making
- Product development, business models, and business practices associated with innovation

### **UNIT III: Business Modeling and New Venture Creation**

**12**

- Identifying a problem or market opportunity
- Process of launching a new venture, in a corporate setting or as a new start-up
- Developing business models, forming a team, analyzing markets, assessing the competitive environment, and planning to acquire leadership talent
- Pitfalls and Plan Execution

### **UNIT IV: Financing Sources Panel & Financial Projections**

**12**

- Bootstrapping the early stages
- Funding from the 3 F's
- Angels
- Private placements
- Customer financing
- Consulting
- Venture capital
- Bank financing
- Financial projection techniques

### **UNIT V: Legal Issues**

**6**

- Intellectual Property Law-Patents

- Copyrights
- Trademarks and Trade secrets
- Major hidden tax traps in starting a business

**Suggested Readings:**

- Mullins, J. W., & Komisar, R. (2009). Getting to plan B breaking through to a better business model. Boston: Harvard Business Press.
- Khanna, T. (2008). Billions of entrepreneurs: How China and India are reshaping their futures and yours. Harvard Business School Press.
- Roy, R. (2008). Entrepreneurship. New Delhi: Oxford University Press.
- Stevenson, H. H., Roberts, M. J., Bhide, A., Shalman, W. A. (Eds.). (2008). The Entrepreneurial venture. (The Practice of Management Series). New Jersey: Harvard Business Press
- Poornima Charantimath, Entrepreneurship development- Small Business Enterprise, Pearson Education
- TN Chhabra, Entrepreneurship Development, Sun India Publications, New Delhi

**Teaching Plan:**

**Week 1:** Understanding, exploring, and applying innovation-related concepts

**Week 2:** Principles, and practices to corporate environments involved with new venture creation and other contexts

**Week 3:** Emerging trends and disruptors in technology and industry that create new markets and influence decision making

**Week 4:** Product development, business models, and business practices associated with innovation

**Week 5:** Identifying a problem or market opportunity

**Week 6:** Process of launching a new venture, in a corporate setting or as a new start-up

**Week 7:** Developing business models, forming a team, analyzing markets, assessing the competitive environment, and planning to acquire leadership talent, Pitfalls and Plan Execution

**Week 8:** Financing Sources Panel & Financial Projections

**Week 9:** Intellectual Property Law-Patents, Copyrights

**Week 10:** Trademarks and Trade secrets

**Week 11:** Major hidden tax traps in starting a business

**Week 12:** Revision and clarification of doubts

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Scan innovative and high-potential commercial opportunities	Unit transaction through power point presentations	Assignments, Open book test
2	Drive innovation and business development	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test

3, 4, 5	Understand the dynamics of enterprise management	Unit transaction through power point presentations and classroom discussion, business plan development	Assignments, Open book test
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## **VISUAL MERCHANDISING AND DISPLAY THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

The course will provide an integrated educational framework within which students are able to acquire knowledge and a range of transferable skills as visual merchandisers and display designers in the contemporary retail environment. It will also provide knowledge and analytical skills in the creation of showroom or retail store window/interior displays that sell merchandise.

### **Course Learning Outcomes:**

After completing this course, students will be able to:

1. Apprehend the key terms and principles involved in the components of Visual Merchandising.
2. Understand the importance of visual merchandising and attractive visual display in communicating with customers.
3. Gain proficiency in a comprehensive range of professional skills for relevant display practices in supporting retail environment.

### **CONTENTS**

### **PERIODS**

#### **UNIT 1: Introduction to Visual Merchandising and window display 20**

- Understanding the importance and theory of Interior Visual Merchandising
- Exploring and understanding company's visual design policy
- Up selling via window display
- Understanding the different components that contribute to creating high quality window displays
- Factors to be considered when creating a professional window display
- Case study of a retail outlet to understand window display strategies

#### **UNIT 2: Design Display types and Materials 20**

- Concept, Purpose, style and importance of displays
- Types of window displays
- Materials used in props, signage for use in displays and exhibits.
- Use of Latest Technologies: Augmented and Virtual reality tools, Robotics.
- Understanding of some useful display fixtures, shelves, gondolas, round racks etc.
- Identify the types of Store Exteriors and Interior Display Components
- Visit to a retail store to study the store layout, design, displays, signage, props used, colour, theme and sensory elements.

### UNIT 3: Professional Practice in Display Design

8

- Assembling and dismantling displays
- Use of safety tools and equipment and procedures for execution of visual display.
- Discussion on safety requirements while changing displays
- Visit to a retail store and observe work related injuries while moving goods.

#### Suggested Readings:

- Essentials of Visual Communication, Laurence King Publishing, London
- Landa, Robin. (2010), Advertising by design: Generating and Designing Creative Ideas Across Media, Second Edition, James Wiley
- Wiley, J. , (2010), Interior lighting for designers, John Wiley & Sons
- Linton, H. (1999). Color in Architecture: Design Methods for Buildings, Interiors and Urban Spaces, McGraw-Hill
- Poore. J. (1994). Interior Colour by Design, Rockport Publishers.
- Khaus, K. (2006). Semantic turn a new foundation for design, CRC press
- Williams, R. (2007), Visual Communication: Integrating Media, Art, and Science, Routledge Communication Series
- Bergstrom, B. (2009). Essentials of Visual Communication, Laurence King Publishing, London

#### Teaching Plan:

**Week 1:** Understanding the importance and theory of Interior Visual Merchandising

**Week 2:** Role of a Visual Merchandiser and Up selling via window display

**Week 3:** Understanding the different components that contribute to creating high quality window displays

**Week 4:** Factors to be considered when creating a professional window display

**Week 5:** Case study of a retail outlet to understand window display strategies

**Week 6:** Concept, Purpose, style and importance of displays

**Week 7:** Types of window displays and materials used in props, signage .

**Week 8:** Use of Latest Technologies: Augmented and virtual reality tools, Robotics, display fixtures, shelves, gondolas, round racks etc.

**Week 9:** Identify the types of store exteriors and interior display components

**Week 10:** Visit to a retail store

**Week 11:** Assembling and dismantling displays

**Week 12:** Use of safety tools and equipment and procedures for execution of visual display

#### Facilitating Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
I	Introduction to Visual Merchandising and window display	Self-directed: Read journal articles, books to collate information on usage of sustainable space Classroom lectures	Comment on a selected article's Group power point presentations on case study.
II	Design Display types and Materials	Classroom lectures site visit	Prepare a list of materials and signages used

III	Professional Practice in Display Design	Classroom lecture, Site visits	Illustrate different safety procedures while assembling and dismantling displays
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**ENTERPRISE DESIGN & MANAGEMENT, VISUAL MERCHANDISING AND  
DISPLAY  
INTEGRATED PRACTICAL**

**Marks: 100**

**Duration: 6 Hrs.**

**Course Objectives:**

This practical is designed to deepen the student's ability to use innovation to design and develop a viable business proposition. It will also provide drawing and analytical skills in the designing of window/interior displays to support visual merchandising.

**Course Learning Outcomes:**

After completing this course, students will be able to:

- Develop a viable business plan
- Create product prototype or service ideas in a start-up context or within an existing organization
- Apply skills to a team project to commercialize an idea, product, technology, or business
- Gain skills in visualizing and drawing various theme based attractive visual displays.
- Create original concepts through texts, images, layout, graphics and colours for products and their display
- Acquire proficiency in display designing projects manually as well as on computer aided software.

**CONTENTS**

**PERIODS**

**UNIT I: ENTERPRISE DESIGN AND MANAGEMENT**

**48**

- Case studies on organizations fostering creativity, innovation, and new venture creation.
- Surveys on emerging trends and disruptors in technology and industry that create new markets and influence decision making.
- Developing networking and negotiation skills.
- Business Opportunity Sensing and developing Business Plans with reference to emerging industry trends.
- Plan appraisal and Resourcing.
- Field visits.

**UNIT II: VISUAL MERCHANDISING AND DISPLAY**

**10**

- **Design Exploration**
  - Exploring different themes as per culture, occasion and brand
  - Creating Theme based mood boards for promotional displays.
  - Material exploration and properties
  - Market survey of materials used in display accessories, props, signage, backdrop,

- banners, planters etc.
- **Planning for Display Areas** 26
  - Measuring of display areas and understanding different styling techniques, themes
  - Symmetrical and asymmetrical accessories used in display
  - Understanding effects using Lighting scheme, Mannequin grouping, Colour, focal points
  - Assessment and evaluation of display areas, Budget
  - Select a product or line of products and create a point-of-sale display
- **Designing for Visual Displays** 12
  - Creating detailed plans using AutoCAD 2D and Photoshop – 2D and 3D displays
  - Developing signage's and graphics for specific areas
  - Designing Lighting plans for creating focal points
  - Understanding Practical aspects and limitations of a planned window; and creating window displays models
  - Selecting coverings, props and merchandise

**Suggested readings:**

- Bhide, A. (2008). The venturesome economy: How innovation sustains in a more connected world. New Jersey: Princeton University press.
- Kuratko, D. F., & Hodgetts, R. M. (2007). Entrepreneurship (7th ed.). USA: Thompson-South Western.
- Kuratko, D. F., & Hodgetts, R. M. (2007). Entrepreneurship: Theory, process, practice. USA: South Western/ Thomson Learning.
- Mullins, J. W. (2006). The new business road test: What entrepreneurs and executives should do before writing a business plan (2nd ed.). Harlow: Prentice Hall Financial Times.
- Stevenson, H. (2007). Perspective on entrepreneurship. Boston: Harvard Business Press.
- Williams. R. (2007). Visual Communication: Integrating Media, Art, and Science, Routledge Communication Series
- Wiley. J. (2010). Interior lighting for designers, John Wiley & Sons
- Shaoqiang.W. (2018). Display Art: Visual Merchandising and Window Display, Flamant publishers

## **INTERNSHIP**

**Course Objectives:**

To gain hands-on experience of working in various settings linked with issues in Resource Management and Design Application.

**Course Learning outcomes:**

Student will be able to -

1. Get hands on experience of real field setting.
2. Develop an understanding of the importance and scope of industry interface
3. Understand the changing micro and macro environment of organizations and importance of industry research and forecasting
4. Develop an understanding of the competitive strategies for industry
5. Establish a link between academic programme and industry as a strategic tool for staying

ahead in a competitive market

**Description:**

The student will be required to undergo a field placement for a total duration of 4-6 weeks in their chosen area of interest after the Semester II and prior to Semester III. Depending on the interest of the students the setting may be corporates, design houses, NGOs, environment management organizations, Govt. agencies, green building consultancy firms, market research firms, International agencies, architect firms, research institutes, urban space planning organization, product developers, national and international social development organizations. They must present a report of the placement in their department. Institutions/organizations chosen should be of good professional standing. The student must participate in the on-going activities of the agency/ establishment, acquire skills and knowledge, gather information and prepare a report to be presented in the department after the completion of the placement period.

**TECHNICAL WRITING & SEMINAR  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To understand the nuances of scientific writing and develop skills in collation and presentation of scientific information along with learning the process of developing a research proposal/ project proposal

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**Course Learning Outcomes:**

Student will be able to -

1. Demonstrate knowledge of scientific writing method and styles
2. Develop a research design on a topic relevant to their field
3. Prepare a systematic literature review on a select topic
4. Present a seminar of the literature review

The practical will have three components. Based on option of students for either dissertation or project work, due emphasis will be provided.

**A) Research design / Project proposal 12**

- Under the guidance of supervisor allocated prepare a research design / project proposal

**B) Skills in Technical Writing 24**

- Learn the nuances of select technical writing styles/ guides
- Analyze technical posters of researches in the fields
- Analyze dissertations, research reports and project evaluation reports and their presentations

**C) Review of Literature & Seminar 12**

- Prepare a literature review on a select topic using an approved style guide
- Conduct Plagiarism check of document prepared
- Present an oral seminar on the topic

**Suggested Readings:**

- Alley, M. (2018) *The Craft of Scientific Writing*. New York: Springer.
- Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage
- Black, J.A. and Champion, D.J. (1976). *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Blaxter, L., Hughes, C, and Tight, K. (1999). *How to Research*. New Delhi: Viva books.
- Blum, D., Knudson M., and Henig, R. M. (2005) *Field Guide for Science Writers: The Official Guide of the National Association of Science Writers*. USA; Oxford University Press.  
<http://www.nasw.org/field-guide>
- Elmes, D.G., Kanowitz, B.H. and Roediger, H.L. (1989). *Research Methods in Psychology* (Third Edition). New York: West Publishing Company.
- Katz, M. (2009) *From Research to Manuscript: A Guide to Scientific Writing (2<sup>nd</sup> Ed)*. New York : Springer
- <http://www.apastyle.org/>
- <http://www.citethisforme.com/guides>

**PRODUCT DESIGN AND DEVELOPMENT  
THEORY****Marks: 100****Duration: 3 Hrs.****Course Objectives:**

This paper will impart knowledge regarding materials and their application for creation of products and services. It strives to develop understanding concerning constructional details of products with special reference to furniture and accessories. It will further help students apply ergonomic principles in design of products for higher user performance and comfort.

**Course Learning Outcomes:**

After completing this course, students will be able to:

1. Identify design problems and propose new and sustainable ideas for product development
2. Create schematic drawings, constructional details and product prototypes with focus is on up-cycling, refurbishment and re-cycling

**CONTENTS****PERIODS****UNIT I: Understanding Context of Product Development****12**

- Need for product development, types of product and components, concerns and issues in the context of design
- Essentials for creating products – skills, knowledge, technology, economic viability, etc.
- Product attributes – form, function and aesthetic
- Exploration of elements of design in the context of a product and its environment
- Sustainable design practices, preserving traditional practices, designing for challenged communities

## **UNIT II: Understanding Materials and Processes** **12**

- Understanding material behavior for furniture construction, product design and aesthetics – properties and finishes (wood, plastic, leather, paper, cloth, rubber, ceramic, glass, metal, bamboo, cane, composite materials, recycled materials)
- New and composite materials – application in product design and impact on environment
- Structural strength of materials and products made from them
- Relating design to materials and process of manufacture
- Application of materials and processes for the craft and industry sector

## **UNIT III: Product Development Process** **12**

- Design methods
- Stages in design process
- Diffusion and innovation – new product ideas
- Integrated approach to new product development

## **UNIT IV: Design Research** **12**

- Assessing market potentials for new products
- Market research, design research and user research
- Study of product life cycle and its relevance in new product design
- Product service system evaluation for a sustainable design

### **Suggested Readings:**

- Aspelund, Karl (2006). *The Design Process*. New York: Fairchild Publications Inc.
- Doren, Harold V. (1954). *Industrial Design – A Practical Guide to Product Design and Development*. New York: McGraw-Hill Book Company.
- Jones, J. Christopher. (1996). *Design Methods: Seeds of Human Factors*. New York: John Wiley & Sons
- Jordan, Pat. (1998). *Human Factors in Product Design: Current Practice and Future Trends*. London: Taylor and Francis.
- Macleod, Dan. (1995). *The Ergonomics Edge: Improving Safety, Quality and Productivity*. New York: Nostrand Reinhold.
- Ulrich, K. T. & Eppinger, S.D. (2011). *Product Design and Development*. McGraw-Hill education
- W.S. Green & P.W. Jordan (Eds) (1999). *Human factors in product design: Current practice and future trends* (pp.206-217). London: Taylor & Francis.

### **Teaching Plan:**

**Week 1:** Unit I: Need for product development, types of product and components, concerns and issues in the context of design

**Week 2:** Unit I: Essentials of creating products – skills, knowledge, technology, economic viability etc.

**Week 3:** Unit I: Product attributes – form, function and aesthetic

**Week 4:** Unit I: Exploration of elements of design in the context of use in products and product environment, Sustainable design practices, preserving traditional practices, designing for challenged communities

**Week 5:** Unit II: Understanding material behavior for furniture construction and product design and aesthetics – properties and finishes (wood, plastic, leather, paper, cloth, rubber, ceramic, glass, metal, bamboo, cane, composite and recycled materials)

**Week 6:** Unit II: New and composite materials – application in product design and impact on environment

**Week 7:** Unit II: Application of materials and processes for the craft and industry sector

**Week 8:** Unit II: Structural strength of products. Relating design to materials and processes of manufacture

**Week 9:** Unit III: Design methods, Stages in design process

**Week 10:** Unit III: Diffusion and innovation – new product ideas, Integrated approach to new product development

**Week 11:** Unit IV: Assessing market potentials for new products, Market research and consumer research

**Week 12:** Unit IV: Study of product life cycle and its relevance in product design, Product service system evaluation for sustainability in design

### Facilitating Achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching & Learning Activity	Assessment Tasks
I	Understanding the basic concepts for product development Learning attributes of products Exploration of elements of design for product development	Classroom lectures and power-point presentations, observations, demonstrations will be the primary teaching mode for understanding basic concepts for product development, product attributes and elements of design	Short assignment on attributes of products  Small exercise on exploring attributes of a few commonly used products
II	Understanding material behavior for product design and relating them to processes of manufacture  Exploring new and composite materials for product design	Classroom lectures and power-point presentations, observations, will be used for understanding material behavior for product design and relating them to processes of manufacture and exploring new and composite materials  Students will be shown a display of different materials for product design – identification, properties and application	Test on structural strengths of products, reference to standards on materials and specifications Quiz (spotting) for identification of materials for product design Case study assignment on application of materials and processes for the craft and industry sector
III	Understanding design methods and stages in design process	Classroom lectures and power-point presentations, observations, demonstrations	Exercise on stages in design process using free hand drawing or

	Diffusion and innovation – new product ideas  Learning integrated approach to new product development	will be used for understanding design methods, stages in design process and integrated approach to new product development	graphic presentation  Assignment on design diffusion and innovation using observations, market research, design research techniques and secondary review
IV	Assessing market potentials for new products  Market research and consumer research  Study of product life cycle  Product service system evaluation for sustainability in design	Classroom lectures and power-point presentations will be used for understanding product life-cycle and product service system evaluation	Case study assignment for assessing market potentials for new products by user and market survey

## **PRODUCT DESIGN AND DEVELOPMENT PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

This paper will impart practical knowledge regarding materials and their application for creation of products. It will develop understanding concerning the design development process and the constructional details of products with special reference to furniture and accessories. It will further help students acquire proficiency in ergonomic design of products for improved performance and comfort.

### **Course Learning Outcomes:**

After completing this course, students will be able to:

1. Develop an attitude towards innovation in design – perception, idea sketching, mock-ups
2. Know about materials available for product design
3. Work on design development, modeling and prototyping

## **CONTENTS**

## **PERIODS**

### **UNIT I: Development of attitude towards design appreciation**

**10**

- Brain storming & synectics to develop creative attitude
- Understanding design opportunity, problem perception and evaluation of concept
- Idea sketching, mock-ups, clustering of ideas for concept development, refinement and detailing

<b>UNIT II: Product lifecycle</b>	<b>5</b>
• Life-cycle assessment of selected products	
<b>UNIT III: Product materials</b>	<b>5</b>
• Survey on new, composite and conventional materials available for product design	
• Analyzing materials for their suitability in product design	
<b>UNIT IV: Design for special needs</b>	<b>14</b>
• Assessing special needs for different situations and applications	
• Designing product for people with special needs	
<b>UNIT V: Portfolio - Product prototyping</b>	<b>14</b>
• Design portfolio indicating the processes for product development	
• Design development, modeling and prototyping	

**Suggested Readings:**

- Aspelund, Karl (2006). *The Design Process*. New York: Fairchild Publications Inc.
- Doren, Harold V. (1954). *Industrial Design – A Practical Guide to Product Design and Development*. New York: McGraw-Hill Book Company.
- Jones, J. Christopher. (1996). *Design Methods: Seeds of Human Factors*. New York: John Wiley & Sons
- Jordan, Pat. (1998). *Human Factors in Product Design: Current Practice and Future Trends*. London: Taylor and Francis.
- Macleod, Dan. (1995). *The Ergonomics Edge: Improving Safety, Quality and Productivity*. New York: Nostrand Reinhold.
- Ulrich, K. T. & Eppinger, S.D. (2011). *Product Design and Development*. McGraw-Hill education
- W.S. Green & P.W. Jordan (Eds) (1999). *Human factors in product design: Current practice and future trends* (pp.206-217). London: Taylor & Francis.

**ADVANCED SPACE DESIGN AND ECOLOGY  
THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

This course focuses on methodological and technical approach to planning spaces and their application in building interiors. The students will gain information and understanding of styles for interior design and professional working drawings.

**Course Learning Outcomes:**

After completing this course, students will be able to:

1. Understand the concept of space design and their application in building interiors.
2. Give technical inputs in professional interior designing of residential & commercial spaces.

## CONTENTS

## PERIODS

### UNIT I: Designing Sustainable Spaces

6

- Structuring spaces for different uses
- Social and psychological context of space design
- Design efficiency in terms of pattern of movement and functionality
- Green building design and audit; LEED, GRIHA and BREEAM rating systems
- Energy efficiency in building construction – techniques and materials
- Modular system in construction of buildings

### UNIT II: Building Specifications

12

- Building specifications for residential and commercial space design as per NBC, and Master plan
- Specific requirements for designing retail spaces - offices & showrooms
- Space planning for selected events - exhibitions and expos, seminars and conferences areas.
- Design parameters for creating universal spaces with focus on inclusivity (people with special needs, elderly, infants and children).

### UNIT III: Space Designing for Interior Services

12

- Lighting design for different spaces
- False Ceilings: construction techniques
- Acoustics: Types of acoustic design and materials, sound transmission, reverberation and propagation
- Air Conditioning: duct design and layout plan
- Fire safety: Types, Evacuation plans
- Types of security services in buildings

### UNIT IV: Restoration and Repair of Heritage properties

8

- Types of heritage structures
- Role of agencies involved in restoration of heritage properties
- Elements of restoration
- Development of architectural styles and trends in India and around the world (Focus on Indian Palaces/Forts etc);
- Building as a Learning Aids (BaLA)

### UNIT V: Project Estimation

10

- Specifications of materials
- Estimating & budgeting: Types of cost estimations and preparing estimates and budgets
- Proposals & tenders
- Site management - Sourcing/ outsourcing
- Implementation of plan of work and meeting deadlines
- Record keeping & filing

**Suggested Readings:**

- Goel, S., Seetharaman, P. & Kakkar, A. (2015). Manual on Interior space designing, Elite publishing house
- National Building code of India (2016), Vol.1 & 2 – Bureau of Indian Standards
- Jain, V. K . (2016). Fire Safety in Buildings, New age publishers
- Lynn M. Jones ,Phyllis S. Allen. (2009). Beginning of interior environments, Pearsons
- Klaus,K. (2006). Semantic turn a new foundation for design, CRC press
- Time Saver Standards for Interior Design and space planning, second edition, McGraw Hill education

**Teaching Plan:**

**Week1:** Understanding types of spaces, its psychology on users

**Week2:** Specific requirements of spaces for different users

**Week3:** Understanding Bye-laws for interior spaces in context of interior designing and its significance

**Week4:** Design requirements for inclusive space design approach

**Week5:** Understanding space planning for exhibition areas

**Week6:** Types of lighting schemes as per design theme and typology

**Week7:** False ceiling, AC ducting construction techniques

**Week8:** Heritage structures in the country, their economic significance

**Week 9:** Role of agencies in conserving heritage properties

**Week10:** Types of estimates, specifications, budgeting.

**Week11:** Preparing project appraisal report and record keeping

**Week12:** Feedback, revision and discussion

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
I	Understanding structure of Space and Sustainable Design with reference to design efficiency and functionality.	Self directed: Read journal articles, books to collate information on usage of sustainable space  Classroom lectures	Comment on a selected article's  Evaluate different types of spaces and their usage through power point presentations.
II	Building Specifications	Classroom lectures,	Prepare a list of building standards as per any standard specifications.
III	Space Designing for Interior Services	Classroom lecture,  Site visits	Illustrate different types of building services in plans

IV	Restoration and Repair of Heritage properties	Classroom lecture, Site visit	Group presentation on restored heritage buildings
V	Project Estimation	Reading CPWD standards Classroom lectures	Preparing an estimate of the given project

## ADVANCED SPACE DESIGN AND ECOLOGY PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

### Course Objectives:

This course focuses on providing practical knowhow on methodological and technical approach to planning spaces and their application in building interiors. The students will learn about the styles for interior design and gain skills in professional working drawings.

### Course Learning Outcomes:

After completing this course, students will be able to:

1. Visualize and draw various theme based interior and exterior design projects.
2. Create working and presentation drawings for community and commercial projects manually as well as on computer aided software.
3. Professionally plan and design interiors for space projects.

### CONTENTS

### PERIODS

#### UNIT I: Design Transition

**10**

- Survey on design transition reflecting user needs
- Site visit to study different types of user friendly designs

#### UNIT II: Design Project

**32**

- **Presentation drawings** - Floor plans of Commercial / Retail Offices, public areas of hotels, stand alone restaurants, gymnasiums, health clubs, sports complex, etc.
- **Working drawings**  
Drawing for interior service plans like Electrical layout, reflected ceiling plans, wall treatment for temperature control and acoustic, electrical planning and other furnishing details
- **Perspective drawing**
- Drawing perspective views of interiors including colour scheme and rendering pencil and colour

#### UNIT III: Estimation and Costing

**6**

- Preparing budgetary estimates and costing of interior materials, lights, fixtures etc. of the selected project.

**Suggested readings:**

- Goel, S., Seetharaman, P. & Kakkar, A. (2015). Manual on Interior space designing ,Elite publishing house
- Shah, M. G., Kale, C. M., Building drawing, 5<sup>th</sup> edition, Tata McGraw Hill publishing, New Delhi.
- Time Saver Standards for Interior Design and space planning, 2<sup>nd</sup> edition, Tata McGraw Hill education
- Neufert, Architects data, 4<sup>th</sup> edition ,Wiley Blackwell
- Ching, Francis D. K . (2014). Building construction illustrated, Wiley, New Jersey

**SUSTAINABLE HABITAT CONCEPT & PRACTICES  
THEORY****Marks: 100****Duration: 3 Hrs.****Course Objectives:**

This course aims to provide an understanding of the concept of sustainable habitat, its components and growth, policies and programs for sustainable habitat. Familiarize students with energy and resource use by buildings, auditing resource use in buildings, net zero buildings and develop an understanding of green building guidelines and norms.

**Course Learning Outcomes:**

After completing this course, students will:

1. Understand the concept and importance of sustainable habitat, policies and programs for sustainable habitat
2. Learn about resource use by buildings, resource auditing, impact of buildings on the environment
3. Understand concept, criteria and implementation of green building guidelines and norms

**CONTENTS****PERIODS****UNIT I: Sustainable habitat****12**

- Concept of sustainable habitat- meaning, importance and need, impact of built environment on natural resources
- Components and growth of sustainable habitat, Policies and programs for sustainable habitat- national urban housing and habitat policy, national rating system for green buildings, national mission for sustainable habitat

**UNIT II: Buildings and resources****12**

- Energy and resource use by buildings - sustainable and otherwise, energy intensive components of buildings, buildings as resource guzzlers
- Impact of building materials on environment
- Energy efficiency and energy conservation in sustainable habitat, material use, water sensitive design, waste water treatment, Resource audit of buildings – focus on energy and water auditing
- Net zero buildings – Concept, importance, practices and case studies

### **UNIT III: Green Rating guidelines: GRIHA**

**12**

- Basic guidelines and norms, ECBC code
- Basics of GRIHA: Background, footprint and registration process
- GRIHA rating systems (SVAGRIHA, GRIHA LD, GRIHA EB, GRIHA AH, GRIHA Prakriti guidelines) – background, documentation and implementation
- Criteria details: Intent, appraisals and compliances
- GRIHA case studies and success stories

### **UNIT IV: Green rating guidelines: LEED**

**12**

- Basics of LEED USGBC and LEED IGBC: Background, footprint and registration process
- LEED USGBC rating systems (BD+C, O+M, ND, Homes etc.) – background and implementation
- LEED IGBC rating systems (New buildings, Existing buildings, Homes, Schools, Factory etc.) – background and implementation
- Credit details: Intent, requirements, approach and methodologies
- LEED case studies and success stories

#### **Suggested Readings:**

- Sinha and Rajiv K. Margaret Greenway. (2004). *Green Technology for Environmental Management and Sustainable Development*. Jaipur: Pointer
- Rider, T. R. *Understanding Green Building Guidelines: For Students and Young Professionals*.
- Cottrell, M. *Guidebook to the LEED Certification Process: For LEED for New Construction, LEED for Core and Shell, and LEED for Commercial Interiors*
- Reference Guide, US Green Building Council
- GRIHA Manual

#### **Teaching Plan:**

**Week 1:** Concept and characteristics of human settlements, Basic concept of sustainable habitat, meaning, importance and need for sustainable habitat

**Week 2:** Components and growth of sustainable habitat, Policies and programs for sustainable habitat-National urban housing and habitat policy, national rating system for green buildings, national mission for sustainable habitat

**Week 3:** Energy and resource use by buildings - sustainable and otherwise, energy intensive components of buildings, buildings as resource guzzlers, Impact of building materials on environment

**Week 4:** Energy efficiency and energy conservation in sustainable habitat, material use, water sensitive design, waste water treatment

**Week 5:** Energy auditing, Energy Productivity, Net zero buildings – Concept, importance, practices and case studies

**Week 6:** Basic guidelines and norms, ECBC code, Basics of GRIHA: Background, footprint and registration process

**Week 7:** GRIHA rating systems (SVAGRIHA, GRIHA LD, GRIHA EB, GRIHA AH, GRIHA Prakriti guidelines) – background, documentation and implementation

**Week 8:** Criteria details: Intent, appraisals and compliances, GRIHA case studies and success stories

**Week 9:** Basics of LEED USGBC and LEED IGBC: Background, footprint and registration process, LEED USGBC rating systems (BD+C, O+M, ND, Homes etc.) – background and implementation

**Week 10:** LEED IGBC rating systems (New buildings, Existing buildings, Homes, Schools, Factory etc.) – background and implementation (Unit – 4)

**Week 11:** Credit details: Intent, requirements, approach and methodologies, LEED case studies and success stories (Unit – 4)

**Week 12:** Revision and clarification of doubts

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Understand the concept and importance of sustainable habitat, policies and programs for sustainable habitat	Unit transaction through power point presentations	Assignments, Open book test
2	Learn about resource use by buildings, resource auditing, impact of buildings on the environment	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test
3, 4	Understand concept, criteria and implementation of green building guidelines and norms	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test

**SUSTAINABLE HABITAT CONCEPT & PRACTICES  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

This course aims to provide an understanding of the concept of sustainable habitat, its components and growth, policies and programs for sustainable habitat. Familiarize students with energy and resource use by buildings, auditing resource, net zero buildings and develop and understanding of green building guidelines and norms.

**Course Learning Outcomes:**

After completing this course, students will:

1. Develop understanding of the importance of sustainable habitat
2. Develop skills in resource auditing of buildings
3. Develop understanding of the green building guidelines and norms in terms of their implementation

## CONTENTS

## PERIODS

<b>UNIT I:</b> Basic calculations of resource consumption in buildings (like energy consumption, water consumption, landscape water demand etc.).	<b>12</b>
<b>UNIT II:</b> Resource auditing of buildings.	<b>12</b>
<b>UNIT III:</b> Critical evaluation and analysis of green buildings through case study approach to assess the green initiatives undertaken.	<b>12</b>
<b>UNIT IV:</b> Compilation of strategies and technologies to implement credits/criteria for an in-depth understanding of the various green building rating systems.	<b>8</b>
<b>UNIT VI:</b> Field visits to various green buildings.	<b>4</b>

### Suggested Readings:

- Kubba, S. *LEED Practices, Certification, and Accreditation Handbook*.
- Trivedy R.K; (2004). *Handbook of Environmental Laws, Acts, Guidelines, Compliances and Standards*"; 2nd Ed, Hyderabad: Book Seller
- Redclift, M., 2005, *Sustainable Development (1987-2005): An Oxymoron Comes of Age*, Wiley Interscience
- *Green Building A to Z: Understanding the Language of Green Building* – October 1, 2007 by Jerry Yudelson

## CAPACITY BUILDING FOR SUSTAINABLE DEVELOPMENT THEORY

**Marks: 100**

**Duration: 3 Hrs.**

### Course Objectives:

The course will equip students in turning sustainable development from concept into practice. The course will address capacity gaps in diagnosing sustainability problems to envisioning alternative future outcomes, creating and implementing transition pathways, monitoring progress and adapting based on what has been learned.

### Course Learning Outcomes:

After completing this course, students will:

1. Understand the fundamentals of organizational capacity building
2. Develop skills in capacity building
3. Be able to institutionalise capacity building

## CONTENTS

## PERIODS

<b>UNIT I: Conceptual framework and Organizational learning</b>	<b>12</b>
• Introduction to Capacity Building	
• Capacity Building and Policy Development	
<b>UNIT II: Organizational capacity development</b>	<b>15</b>
• Organizational flexibility and change	

- Knowledge generation and acquisition
- Technical skills, goal – oriented focus
- Inter-organizational relations-connectedness, trust, communication, information sharing, advocacy & innovation

**UNIT III: Interventional Strategies for sustainable development** **15**

- Targeting and building critical mass
- Training Need Assessment (TNA)
- Training methodologies
- ICT for sustainable development
- Training Evaluation

**UNIT IV: Institutionalizing capacity building Programmes** **6**

- Approaches to lab to land transfer

**Suggested Readings:**

- James, V. U. (2018). *Capacity building for sustainable development*. UK: CAB International.
- Bluementhal, B. *Investing in Capacity Building: A Guide to High-Impact Approaches*.
- Bemmerlein-Lux, F. & Bank, P. (2011). *Lessons Learnt & Tools Applied A Working Book on Capacity Building Approaches in India*. Germany: GIZ.
- Kenny, S., Clarke, M. (Eds.). (2010). *Challenging Capacity Building Comparative Perspectives*. UK: Palgrave Macmillan UK.

**Teaching Plan:**

**Week 1:** Introduction to Capacity Building

**Week 2:** Capacity Building and Policy Development

**Week 3:** Organizational flexibility and change

**Week 4:** Knowledge generation and acquisition

**Week 5:** Technical skills, goal – oriented focus

**Week 6:** Inter-organizational relations-connectedness, trust, communication, information sharing, advocacy & innovation

**Week 7:** Targeting and building critical mass

**Week 8:** Training Need Assessment (TNA)

**Week 9:** Training methodologies

**Week 10:** Training methodologies, ICT for sustainable development

**Week 11:** Training Evaluation

**Week 12:** Institutionalizing capacity building Programmes: Lab to land and Revision

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Understand the fundamentals of organizational capacity building	Unit transaction through power point presentations	Assignments, Open book test

2, 3	Develop skills in capacity building	Unit transaction through power point presentations and classroom discussion, designing capacity building programmes	Quizzes and objective test
4	Be able to institutionalise capacity building	Unit transaction through power point presentations and classroom discussion	Assignments, Open book test, quizzes

### **CAPACITY BUILDING FOR SUSTAINABLE DEVELOPMENT PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

The course will help students attain proficiency in developing and strengthening the skills, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in the fast-changing world.

**Course Learning Outcomes:**

After completing this course, students will:

1. Demonstrate organizational capacity building strategies
2. Plan and conduct capacity building programmes
3. Develop suitable ICT material

**CONTENTS**

**PERIODS**

<b>UNIT I:</b> Critical evaluation of organizational capacity building through case studies and visits.	<b>10</b>
<b>UNIT II: Developing skills in:</b>	<b>15</b>
<ul style="list-style-type: none"> <li>• Targeting</li> <li>• TNA</li> <li>• Transacting different training methodologies</li> <li>• Develop ICT material for sustainable development</li> <li>• Training Evaluation</li> </ul>	
<b>UNIT III:</b> Develop Capacity building Programmes.	<b>10</b>
<b>UNIT IV:</b> Advocacy and networking for institutionalising capacity building programmes.	<b>8</b>
<b>UNIT V:</b> Field visits.	<b>5</b>

**Suggested Readings:**

- Blumenthal, Barbara. (2003) Investing in Capacity Building: A Guide to High-Impact Approaches. The Foundation Center.
- Connolly, Paul M. (2006) Navigating the Organizational Lifecycle: A Capacity-Building Guide for Nonprofit Leaders. Washington D.C: Board Source.

## **SEMESTER IV**

<b>SEMESTER IV</b>				
<b>Number of core courses</b>	<b>Credits in each core course</b>			
Course	Theory	Practical	Tutorial	Credits
Core course 15 RMDACC415: Dissertation/Experiential Learning Project		4		4
Total credits in core course	4			
<b>Number of elective courses</b>	<b>Credits in each Elective course</b>			
Credits in each elective course	Theory	Practical	Tutorial	Credits
RMDAEC 403A/B: Elective course 3	4	2		6
RMDAEC404A/B: Elective course 4	4	2		6
RMDAEC405A/B: Elective course 5	4	2		6
Total credits in elective courses	18			
<b>Total credits in Semester IV 22</b>				

**Elective Courses: Select any one specialization of the following:**

- **Specialization A: Space & Product Design**
  - RMDAEC403A: Design Clinic & Audit
  - RMDAEC404A: Ergonomics: Human factors in Design
  - RMDAEC405A: Professional Practices in Design & Start-ups
- **Specialization B: Environment Management & Sustainable Development (any 3)**
  - RMDAEC403B: Policies & Practices for Sustainable Development
  - RMDAEC404B: Climate Change & Ecosystem: Issues & Concerns
  - RMDAEC405B: Health & Safety in Built Environment

## **DISSERTATION/ EXPERIENTIAL LEARNING PROJECT**

### **Course Objectives:**

To develop skills in conducting a research study/ working in a project and learn the process of writing a dissertation/ project report

### **Course Learning Outcomes:**

Student will be able to -

1. Know the practical aspects of, collecting data/ project work
2. Evaluate, select and use appropriate strategies for reduction, analysis and presentation of data collected during research process/ project work
3. Suitably illustrate data/ insights using various graphical and other methods.
4. Prepare a dissertation document/ project report based on research process/ project work done.

Students will be given an option of doing either

A) Dissertation or B) Project work in a chosen area congruent to their discipline/ field of study.

The work will be an original effort.

## **DESIGN CLINIC AND AUDIT THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

This paper will develop acumen to identify design problems and find appropriate solutions for given situations or products. To equip students for integration of sustainable design of products and services and develop analytical ability by augmenting design audits for feasibility, viability and sustainability of their designs.

### **Course Learning Outcomes:**

After completing this course, students will be able to:

1. Identify design problems and find appropriate solutions using life-cycle assessment approach.
2. Critically analyze and evaluate designs for safety, ergonomics, functionality and sustainability by audit of products.

## **CONTENTS**

## **PERIODS**

### **UNIT I: PRODUCT SEMANTICS**

**12**

- Theories of product semantics
- Concept of product emotion, value and attachment
- Development of a logical design approach
- Concept of product identity
- Usability and user experience

### **UNIT II: DESIGN AS A MANAGEMENT TOOL**

**10**

- Design evaluation, designer attributes, setting up a design office

- Finding clients, business correspondence
- Management of design process
- Human factors in managing design/team work
- Professional practice in design
  - Design brief – letter of contract
  - Ethics
  - Costing for the designed product or service and fee estimation
- Patent and design registration laws and procedure

### **UNIT III: PRODUCT INTERFACE DESIGN**

**14**

- Investigations and study of visual, functional and ergonomic requirements of product design
- Study of the processes of building interactions
- Experiential ideation
- Activity analysis – structuring of content
- Human factors in design
- User-centred design
- Participatory design
- Scenario building – linear and animatic storyboarding
- Prototyping and design
- Evaluating user interfaces
- Design for complex systems and environments

### **UNIT IV: PRODUCT ANALYSIS AND AUDIT**

**12**

- Product Analysis – diachronic and synchronic
- Understanding and analysing contexts – parallel and future situations
- Design service
- Evaluation of design guidelines
- Design audit

#### **Suggested Readings:**

- Gandotra, V. et al. (2013). *Essentials of Ergonomics*, Dominant Publishers: Delhi
- John, T. (2005). In the bubble: designing in a complex world
- Jordan, Pat. (1998). *Human Factors in Product Design: Current Practice and Future Trends*. London: Taylor and Francis.
- Krippendorff, K. (2006). *The Semantic Turn: A new foundation for design*. Boca Raton, London, New York: Taylor & Francis, CRC Press.
- Macleod, Dan. (1995). *The Ergonomics Edge: Improving Safety, Quality and Productivity*. New York: Nostrand Reinhold.
- Mugge, R. (2008). *Emotional Bonding with Products: Investigating Product Attachment from a Design Perspective*. VDM Verlag
- Norman, D.A. (2004). *Emotional Design: Why we love (or hate) everyday things*. New York, NY: Basic Books.
- Norrid, B and Wilson, J.R. (2001). *Designing Safety into Products*. London: Taylor and Francis.
- William, L. (2003). *Universal Principles of design*, Rockport.

- Wilson, J.R. and Covlett, N. (2001). *Evaluation of Human Work: A Practical Ergonomics Methodology*. London: Taylor and Francis

**Teaching Plan:**

**Week 1:** Unit I: Theories of product semantics

**Week 2:** Unit I: Concept of product emotion, value and attachment, Development of a logical design approach

**Week 3:** Unit I: Concept of product identity, Usability and user experience

**Week 4:** Unit II: Design evaluation, designer attributes, setting up a design office, Finding clients, business correspondence

**Week 5:** Unit II: Management of design process, Human factor in managing design/team work

**Week 6:** Unit II: Professional practice in design: Design brief – letter of contract, Ethics, Costing design and fee estimation, Patent and design registration laws and procedure

**Week 7:** Unit III: Investigations and study of visual, functional and ergonomic requirements, Study of the process of building interactions

**Week 8:** Unit III: Human factor in design, User centred design process

**Week 9:** Unit III: Participatory design, Experiential ideation

**Week 10:** Unit III: Activity analysis – structuring of content, Scenario building – linear and animatic storyboarding, Prototyping and design, Evaluating user interfaces

**Week 11:** Unit IV: Product Analysis – diachronic and synchronic, Understanding and analysing contexts – parallel and future situations

**Week 12:** Unit IV: Design service - Evaluation of design guidelines, Design audit, Design for complex systems and environments

**Facilitating Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching & Learning Activity	Assessment Tasks
I	<p>Understanding theories of product semantics</p> <p>Learning the concepts of product emotion, value and attachment</p> <p>Understanding development of a logical design approach</p> <p>Exploring concept of product identity, usability and user experience</p>	<p>Classroom lectures and power-point presentations will be the primary teaching mode for understanding theories of product semantics, concepts of product emotion, value and attachment, product identity, usability and user experience</p> <p>A small exercise on development of a logical design approach</p>	<p>Short assignment on theories of product semantics</p> <p>Test on concepts of product emotion, value and attachment</p>
II	<p>Understanding design as a management tool</p> <p>Exploring professional practice in design</p>	<p>Classroom lectures and power-point presentations will be used for understanding design as a tool for management,</p>	<p>Case study assignment on professional practices in design</p> <p>Making a design brief</p>

	<ul style="list-style-type: none"> <li>▪ Design brief – letter of contract</li> <li>▪ Ethics</li> <li>▪ Costing design and fee estimation</li> </ul> <p>Patent and design registration laws and procedure</p>	<p>professional practice in design</p> <p>Case study of patented and registered design to explore and learn the requirements and procedures for design patent and registration</p>	<p>– letter of contract</p>
III	<p>Understanding product interface design –</p> <ul style="list-style-type: none"> <li>• investigations and study of visual, functional and ergonomic requirements</li> <li>• Human factor in design</li> <li>• User centred design process</li> <li>• Participatory design</li> <li>• Experiential ideation</li> <li>• Activity analysis – structuring of content</li> </ul> <p>Scenario building – linear and animatic storyboarding and prototyping</p>	<p>Classroom lectures and power-point presentations will be used for understanding product interface design and scenario building</p> <p>Case study of scenario building and understanding linear and animatic storyboarding through demonstration on black/white boards</p>	<p>An exploratory assignment on human factors in design – interview product users</p> <p>Building a design scenario on paper using linear and animatic storyboarding</p>
IV	<p>Understanding product analysis and audit</p> <p>Evaluation of design guidelines</p>	<p>Classroom lectures and power-point presentations will be used for understanding product analysis and audit and evaluation of design guidelines</p>	<p>Case study assignment for evaluation of design guidelines</p>

## **DESIGN CLINIC AND AUDIT PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

This paper will equip students with the competence to identify design problems and find appropriate solutions. Enable them to develop analytical ability to audit designs for feasibility, viability and sustainability. It will help acquire proficiency in working with different materials and prototyping.

### **Course Learning Outcomes:**

After completing this course, students will be able to:

1. Develop acumen to critically evaluate design problems and finding solutions
2. Develop expertise in working on variations of improvised products and prototyping

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Product analysis**

**12**

Critical analysis of products with respect to

- design audit
- sustainability audit
- safety audit
- ergonomic audit

#### **UNIT II: User interface design**

**15**

User interface design portfolio

- Critical evaluation of existing product
- Finding solution to design problems
- Sketches and design of improvised product

#### **UNIT III: Prototyping product**

**15**

Prototyping new product based on improvised design of user-interface

#### **UNIT IV: Variations of product**

**6**

Working on variations or different formats of the new product

### **Suggested Readings:**

- Krippendorff, K. (2006). *The Semantic Turn: A new foundation for design*. Boca Raton, London, New York: Taylor & Francis, CRC Press.
- Mugge, R. (2008). *Emotional Bonding with Products: Investigating Product Attachment from a Design Perspective*. VDM Verlag
- Norman, D.A. (2004). *Emotional Design: Why we love (or hate) everyday things*. New York, NY: Basic Books.
- Jordan, Pat. (1998). *Human Factors in Product Design: Current Practice and Future Trends*. London: Taylor and Francis.

- Macleod, Dan. (1995). *The Ergonomics Edge: Improving Safety, Quality and Productivity*. New York: Nostrand Reinhold.
- Norrid, B and Wilson, J.R. (2001). *Designing Safety into Products*. London: Taylor and Francis.
- Wilson, J.R. and Covlett, N. (2001). *Evaluation of Human Work: A Practical Ergonomics Methodology*. London: Taylor and Francis

## **ERGONOMICS: HUMAN FACTORS IN DESIGN THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

This course is centered on understanding human capabilities and limitations as applied to designing workspaces, work methods and jobs for optimum safety, efficiency, productivity and comfort. It involves the application of ergonomic principles in addressing various ergonomic concerns. Occupational safety and hazard analysis also forms an integral aspect of this course.

### **Course Learning Outcomes:**

After completing this course student will be able to:

1. Comprehend the ergonomic principles to design comfortable and efficient workspaces
2. Acquire knowledge in handling ergonomic related problems and design user-centered products
3. Apprehend anthropometry and its role in industrial design
4. Comprehend principles of kinesiology and biomechanics for improved posture and well-being
5. Understand the breadth and scope of occupational ergonomics through assessment of human interaction in work environment system

## **CONTENTS**

## **PERIODS**

### **UNIT 1: Introduction and overview of ergonomics**

**10**

- Definition, importance and scope
- Ergonomic models, methods, tools and techniques
- Ergonomic risk factors
- Work related ergonomic problems (safety, accuracy, speed, reliability, comfort)
- Human factors: work efficiency and performance
- User-centered design

### **UNIT 2: Anthropometry & Biomechanics**

**10**

- Anthropometric measurements
- Static and dynamic anthropometry, anthropometric application in design development and evaluation
- Kinesiology and biomechanics, human leverage system and its mechanical benefits, biomechanics and posture for various tasks

### **UNIT 3: Workplace ergonomics and design**

**14**

- Work station and equipment design, balance of space, flow of work, time and motion studies

- Job design and analysis, evaluation of work, warnings and risk communication in work
- Product design & analysis
- Indices of comfort in internal environment – temperature, ventilation, humidity, lighting, noise, vibration, flooring, clothing, materials and finishes

#### **UNIT 4: Occupational ergonomics and safety in living spaces**

**14**

- Performance appraisal, performance related problems
- Health and safety, health monitoring protective equipment, safe work practices, safety of equipment, occupational hazards
- Occupational safety analysis
- Ergonomic standards and legislations for health and safety
- Perspectives in rehabilitation ergonomics

#### **Suggested Readings:**

- Bhattacharya, A., McGlothlin J.D. (2012). *Occupational Ergonomics: Theory and Applications*. CRC Press. (Unit 4)
- Bridger, Robert S. (2009). *Introduction to Ergonomics*. 3rd ed., CRC Press. (Unit 1)
- Hedge, A. (2017). *Ergonomic Workplace Design for Health, Wellness, and Productivity*. CRC Press, Taylor & Francis Group. (Unit 3 & 4)
- Knudson, D. (2007). *Fundamentals of Biomechanics*. 2nd ed., Springer Science Business Media, LLC. (Unit 2)
- Pheasant, S., Haslegrave, C.M. (2006). *Bodyspace: Anthropometry, Ergonomics, and the Design of Work*. Taylor & Francis. (Unit 1 and 2)
- Salvendy, G. (2012). *Handbook of Human Factors and Ergonomics*. 4th ed., Wiley Publications. (Unit 1 and 3)

#### **Teaching Plan:**

**Week 1:** Unit 1: Introduction and overview of ergonomics - Definition, importance and scope, Ergonomic models, methods, tools and techniques, Ergonomic risk factors

**Week 2:** Unit 1: Introduction and overview of ergonomics - Work related ergonomic problems (safety, accuracy, speed, reliability, comfort), Human factors: work efficiency and performance

**Week 3:** Unit 1: Introduction and overview of ergonomics - User-centered design, Unit 2: Anthropometry & Biomechanics - Anthropometric measurements

**Week 4:** Unit 2: Anthropometry & Biomechanics - Static and dynamic anthropometry, anthropometric application in design development and evaluation

**Week 5:** Unit 2: Anthropometry & Biomechanics - Kinesiology and biomechanics, human leverage system and its mechanical benefits, biomechanics and posture for various tasks

**Week 6:** Unit 3: Workplace ergonomics and design - Work station and equipment design, balance of space, flow of work, time and motion studies

**Week 7:** Unit 3: Workplace ergonomics and design - Time and motion studies, Job design and analysis, evaluation of work, warnings and risk communication in work

**Week 8:** Unit 3: Workplace ergonomics and design - Product design & analysis, Indices of comfort in internal environment – temperature, ventilation, humidity, lighting

**Week 9:** Unit 3: Workplace ergonomics and design - Indices of comfort in internal environment – noise, vibration, flooring, clothing, materials and finishes, Unit 4: Occupational ergonomics and safety in living spaces - Performance appraisal, performance related problems

**Week 10:** Unit 4: Occupational ergonomics and safety in living spaces - Health and safety, health monitoring protective equipment, safe work practices, safety of equipment, occupational hazards

**Week 11:** Unit 4: Occupational ergonomics and safety in living spaces - Occupational safety analysis

**Week 12:** Unit 4: Occupational ergonomics and safety in living spaces - Ergonomic standards and legislations for health and safety, Perspectives in rehabilitation ergonomics

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching & Learning Activity	Assessment Tasks
I	<ul style="list-style-type: none"> <li>Ability to handle ergonomic related problems and design user-centered products</li> </ul>	Classroom lectures and Power-point presentations will be the primary teaching mode for understanding basic concepts in ergonomic design and its related components	Quiz on ergonomic models, work related ergonomic problems and user-centered design
II	<ul style="list-style-type: none"> <li>Understand anthropometry and its role in industrial design</li> <li>Comprehend principles of kinesiology and biomechanics for improved posture and well-being</li> </ul>	<p>Classroom lectures and power-point presentations will be used for understanding basic concepts in anthropometry, kinesiology and biomechanics</p> <p>Students will also be shown educational videos on application of such concepts (anthropometry, kinesiology and biomechanics) in enhancing workspace design and improving posture.</p>	<p>Test on various anthropometric measurements and their application in product and workspace design</p> <p>Case study assignment on application of kinesiology and biomechanics in building efficient workspaces</p>
III	<ul style="list-style-type: none"> <li>Knowledge of ergonomic principles to design comfortable and efficient workspaces</li> </ul>	Classroom lectures and power-point presentations will be used for understanding the basic ergonomic principles as applied to workspace design.	<p>Short assignment on workplace ergonomics and design</p> <p>Quiz on indices of indoor comfort</p>

IV	<ul style="list-style-type: none"> <li>Understand the breadth and scope of occupational ergonomics through assessment of human interaction in work environment system</li> </ul>	<p>Classroom lectures and power-point presentations will be used for understanding the scope of occupational ergonomics</p> <p>Videos showcasing various occupational hazards will be shown to the students followed by an active discussion on safe work practices</p> <p>Students will also be taken on field to give them hands-on exposure</p>	<p>Power-point presentation on various occupations and their related hazards (summary of student's field visit)</p>
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**ERGONOMICS: HUMAN FACTORS IN DESIGN  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

This practical focuses on development of ergonomically designed workspaces, products and equipment through extensive user-centered research and design. It also explores traditional as well as contemporary methods and techniques employed for user safety, efficiency and comfort.

**Course Learning Outcomes:**

After completing this course student will be able to:

1. Evaluate anthropometric measurements of users in terms of space and product design
2. Build ergonomically designed workstations and products using user-centered research and design methods
3. Assess human energy efficiency through time and motion studies
4. Develop a project on occupational safety and health

**CONTENTS**

**PERIODS**

**UNIT 1: Anthropometry**

**6**

- Assessing application of anthropometric measurements in creating efficient workspaces, products and equipment
- Developing anthropometric data for different users using an anthropometer

**UNIT 2: Workstation & Product Design** **24**

- Developing checklists, questionnaires, interview schedules to study user behaviour and attitudes – for rehabilitation and design of workplaces
- Creating ergonomically designed products/ workstation (prototypes) using user-centered research and design methods

**UNIT 3: Time & Motion Studies** **6**

- Evaluating distance travelled by a worker during a task using pathway chart
- Assessing sequence of steps in a process for identifying possible areas of improvement using a process chart

**UNIT 4: Project** **12**

- Exploring different occupations and their related components-workplace design, equipment used, hazards and safety practices
- Equipment design (prototype) for different occupations

**Suggested Readings:**

- Gandotra, V. et al. (2013). *Essentials of Ergonomics*, Dominant Publishers: Delhi
- Wilson, J.R. and Covlett, N. (2001). *Evaluation of Human Work: A Practical Ergonomics Methodology*. London: Taylor and Francis
- Hedge, A. (2017). *Ergonomic Workplace Design for Health, Wellness, and Productivity*. CRC Press, Taylor & Francis Group.
- Bhattacharya, A., McGlothlin J.D. (2012). *Occupational Ergonomics: Theory and Applications*. CRC Press.

**PROFESSIONAL PRACTICES IN DESIGN & START-UPS  
THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

This paper will help students to consolidate their knowledge acquired during the course and convert into a start up in design. They will understand the finer details required by a professional practitioner of design.

**Course Learning Outcomes:**

After completing this course, students will be able to:

1. Comprehend the importance of startups and identification of business opportunities
2. Develop a portfolio of a design professional
3. Create competence for initiating own startups

**CONTENTS**

**PERIODS**

**UNIT I: Design Industry Connect** **14**

- Interacting with design related industries(interior products and design related, event design and decor, landscape design, facilities and services management, new product development, furniture design, upcycling, refurbishing or recycling industries and so on) with respect to
  - manpower and work profile

- consultation and advice
- product development strategy
- design approach
- Engaging with real life projects
- Development of a future project with commercial promise for a specific design industry
- Develop a network of collaboration with relevant industries

## **UNIT II: Protecting Intellectual Property Rights 6**

- Understanding the relevance and process (laws and procedures)of Intellectual Property Rights: Patents, Copy right, Industrial design, Trademark, service mark, Layout designs of integrated circuits, Geographical indication
- Applying for appropriate IPR to protect the design from plagiarism

## **UNIT III: Initiating a startup 18**

- Exploring a startup idea or a business opportunity through market assessment and consumer research. ability
  - Developing feasible idea through conceptualization, ideation and innovation
  - Checking feasibility in terms of technology, market potential, finance and human resources
- Developing personal and professional portfolio covering technical, social, economic and environmental aspects
- Marketing and branding: market segmentation, USP, brand building
- Identifying structure for the startup organization: sole proprietorship, partnership, limited company, co-operative, franchise or social enterprises
- Identifying challenges and solving problems for a successful startup
- Registration process: selecting a company name, acquiring digital signature certificate (DSC) and Director Identification Number (DIN), filling relevant forms with supporting documents, registration of the startup
- Government programmes and policies supporting startups

## **Unit IV: Costing and Financial Planning 10**

- Preparing cost estimates for technical, manpower and other resources; recurring and non-recurring; rate of return and break-even analysis; overheads / operational costs
- Financial analysis, support systems and funding: sources of funding, costing and budgeting, formal and informal sources of support, networking
- Legal & ethical compliance: regulations, taxation, business ethics
- Writing a business plan

### **Suggested Readings**

- Viki, T. (2017). *The corporate startup: How established companies can develop successful innovation ecosystems* (Vol. 1). Deventer: Vakmedianet.
- *Life Orientation Computer skills hands on training: MS Office 2010, 4* (Vol. 2). (2014). Mowbray: Future Managers.
- *How to start a startup: The Silicon Valley playbook for entrepreneurs.* (2016). San Francisco, CA: PlatoWorks.

- S Reum, C., & Reum C. (2018). *Shortcut your startup: Speed up success with unconventional advice from the trenches*. New York: GalleryBoks/Jeter Publishing.

**Teaching Plan:**

**Week 1:** Unit I: Design Industry Connect - Interacting with design related industries (interior products and design related, event design and decor, landscape design, facilities and services management, new product development, furniture design, upcycling, refurbishing or recycling industries and so on) with respect to manpower and work profile, consultation and advice, product development strategy, design approach

**Week 2:** Unit I: Design Industry Connect - Engaging with real life projects, Development of a future project with commercial promise for a specific design industry

**Week 3:** Unit I: Design Industry Connect - Develop a network of collaboration with relevant industries

**Week 4:** Unit II: Protecting Intellectual Property Rights - Understanding the relevance and process (laws and procedures) of Intellectual Property Rights: Patents, Copy right, Industrial design, Trademark, service mark, Layout designs of integrated circuits, Geographical indication

**Week 5:** Unit II: Protecting Intellectual Property Rights - Applying for appropriate IPR to protect the design from plagiarism

**Week 6:** Unit III: Initiating a startup - Exploring a startup idea or a business opportunity through market assessment and consumer research - Developing feasible idea through conceptualization, ideation and innovation, Checking feasibility in terms of technology, market potential, finance and human resources

**Week 7:** Unit III: Initiating a startup - Developing personal and professional portfolio covering technical, social, economic and environmental aspects, Marketing and branding: market segmentation, USP, brand building

**Week 8:** Unit III: Initiating a startup - Identifying structure for the startup organization: sole proprietorship, partnership, limited company, co-operative, franchise or social enterprises, Identifying challenges and solving problems for a successful startup

**Week 9:** Unit III: Initiating a startup - Registration process: selecting a company name, acquiring digital signature certificate (DSC) and Director Identification Number (DIN), filling relevant forms with supporting documents, registration of the startup, Government programmes and policies supporting startups

**Week 10:** Unit IV: Costing and Financial Planning, Preparing cost estimates for technical, manpower and other resources; recurring and non-recurring; rate of return and break-even analysis; overheads / operational costs

**Week 11:** Unit IV: Costing and Financial Planning - Financial analysis, support systems and funding: sources of funding, costing and budgeting, formal and informal sources of support, networking, Legal & ethical compliance: regulations, taxation, business ethics

**Week 12:** Unit IV: Costing and Financial Planning - Writing a business plan

**Facilitating the Achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching & Learning Activity	Assessment Tasks
I	<ul style="list-style-type: none"> <li>• Developing a basic understanding for startups</li> </ul>	Classroom lectures and power-point presentations	Test on basic concepts of startup and professional

	<p>and professional practices with life projects.</p> <ul style="list-style-type: none"> <li>Understanding commercial feasibility and developing networks with relevant industries.</li> </ul>	<p>will be the primary mode of teaching.</p> <p>Case study methods will be used to initiate discussion among the class.</p> <p>Field visits to various organizations</p>	<p>practices</p> <p>Developing future projects based on a product/service/ event</p>
II	<ul style="list-style-type: none"> <li>Understanding Legal and Ethical compliance of a Design startup</li> <li>Developing knowledge about IPR for protecting designs</li> </ul>	<p>Classroom lectures, group discussions and power-point presentations will be used for understanding various fundamentals of a startups and</p> <p>Students will also be taken for field visits to give them hands-on exposure</p>	<p>Test on relevance and process of IPR</p> <p>Preparation of documents and filling of IPR form (Govt. of India)</p>
III	<ul style="list-style-type: none"> <li>Developing skills for assessing market in terms of technology, finance, innovation and resources.</li> <li>Developing an understanding of professional and personal portfolios</li> <li>Understanding the structure and registration procedure for a startup</li> </ul>	<p>Classroom lectures and power-point presentations will be used for understanding the procedure for registering for a startup</p> <p>Primary and Secondary data survey will also be used for greater insight.</p>	<p>The registration form available online for 'Startup India' will be used to guide students about various heads.</p> <p>Case profiling of successful and unsuccessful startups to check for their feasibility, ideation, finance and innovation</p>
IV	<ul style="list-style-type: none"> <li>Learning cost estimation and budgeting for any startup.</li> <li>Developing an understanding for funding – sources, procedure and</li> </ul>	<p>Classroom lectures and power-point presentations will be used for understanding costing and finance</p>	<p>Preparation of a Business Plan for the product / service/ event</p>

	networking.  <ul style="list-style-type: none"> <li>Ability to analyze and write business plans</li> </ul>	Secondary data analysis of Existing business plans, financial reports and funding documents for developing knowledge of legal and ethical compliance.	
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**PROFESSIONAL PRACTICES IN DESIGN & START-UPS  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

This practical focuses on development of presentation and communication skills through interactive software’s and on-field experience. It also focuses on developing business proposal for understanding essential elements of a startups.

**Course Learning Outcomes:**

After completing this course, students will be able to:

1. Acquire professional skills for a startup
2. Comprehend dynamics and challenges associated with startups

**CONTENTS**

**PERIODS**

**UNIT I: Design Interactions**

**14**

- Interacting with design related industries (interior products and design related, event design and decor, landscape design, facilities and services management, new product development, furniture design, upcycling, refurbishing or recycling industries and so on)
  - Engaging with real life projects
  - Development of a future project with commercial promise
  - Develop a network of collaboration
- Developing a personal and professional portfolio

**UNIT II: Developing Presentation and Communication skills**

**12**

- Professional skills for presentation of design project
- Case studies of successful startups/enterprises

**UNIT III: Preparation of Business Plan/ Portfolio Design**

**22**

Project - preparing a business plan for a startup including financial analysis, legal & ethical compliance, marketing and branding

- Registering the startup
- Execution of the startup

**Suggested Readings:**

- Mohan, K., Mohan, K. & Banerji, M. (2009). Developing *communication skills*. New Delhi, India: Macmillan India.
- Steward, R.D., & Steward, A.L. (1992). *Proposal preparation*. New York: Wiley

**POLICIES & PRACTICES FOR SUSTAINABLE DEVELOPMENT  
THEORY**

**Marks: 100****Duration: 3 Hrs.****Course Objectives:**

The course aims to sensitize the students towards indicators and measures of sustainable development, give knowledge of and capacity to analyze policies and practices for sustainable development of different sectors, management strategies for water, waste, energy etc., and understand the components and techniques of EIA.

**Course Learning Outcomes:**

After completing this course, students will:

1. Gain insight into the need, indicators and measures of sustainable development along with challenges and responses
2. Understand and critically analyze policies and practices regarding various sectors- energy, air, water, waste, agriculture, etc.
3. Gain knowledge of water management systems, water quality parameters, waste water management, rainwater harvesting
4. Gain knowledge of technologies of waste management, health impact, policy for MSW management, energy recovery from waste
5. Understand the components & techniques of EIA, legislative aspects, current practices & constraints

**CONTENTS****PERIODS****UNIT I: Concept of sustainable development****8**

- Concept of sustainability, principles, dimensions of sustainability - social, economic and technological; changing perspective, promoting sustainable development
- Need, indicators and measures for sustainable development
- Challenges to Sustainable Development- agriculture, population, food security, public health, education, natural resources, climate change
- Responses to sustainable development: Public Policy (Community Participation and Participatory Learning), gender and human rights, technology etc.
- Evolution, approaches, interpretation of SDGs, overall policy environment

**UNIT II: Energy management and sustainable development****12**

- Relationship between energy, environment and economic development
- Energy budgeting of earth's atmosphere, programs and policies for energy management, Energy use and global climate change, GHG emissions, climate change debate
- Legislations guiding energy sector and Energy scenario in India, Policies and practices regarding various sectors- air, water, waste, agriculture, forests and bio-diversity
- Policies and practices, Issues and challenges, current potential, future prospects in

conventional and non-conventional energy resources -Coal and lignite, natural gas, petroleum products, nuclear energy and their environmental issues; Non-conventional energy sources - need, sources and significance- Solar thermal energy; Solar photovoltaic, bio-energy, hydroelectricity, tidal power, wind energy, wave energy, geothermal energy

**UNIT III: Water management: Policy, Practices and technologies** **10**

- Need and importance of water management systems, surface and ground water management, water quality parameters
- Water pollutants and their health impact
- Waste water management systems: techniques and technologies
- Rainwater harvesting: need and principle

**UNIT IV: Waste management: Policy, Practices and technologies** **10**

- Need and importance of waste management, quantum, classification, present scenario of disposal, technologies used for waste management, health impact
- Solid waste management Policy for MSW, Biomedical waste, e-waste and other hazardous waste
- Energy recovery from wastes and environment – RDF, waste to energy plants etc.

**UNIT V: Assessing Environmental Impacts** **8**

- Environmental Impacts – examples, need for assessment, difficulties
- The EIA Approach – Background, Objectives, Components & Techniques
- Environmental impact assessment- importance, significance, steps, procedure to be followed, role of Government and non-governmental organizations
- EIA in India – Legislative aspects, Current practices & Constraints, way forward

**Suggested Readings:**

- International Energy Agency (2017). *Energy Technology Perspectives 2017*, Paris, International Energy Agency, June
- United Nations (2015), *Transforming our world: the 2030 Agenda for Sustainable Development* [Resolution adopted by the General Assembly on 25 September 2015], 70/1, New York, NY, UN General Assembly
- Sachs, Jeffrey D. (2015). *The Age of Sustainable Development*. New York, NY, Columbia University Press
- Scruton, Roger. (2012). *How to Think Seriously about the Planet: The Case for an Environmental Conservatism*, Oxford, Oxford University Press
- Renewable energy engineering and technology – A knowledge compendium. Edited by V V N Kishore, Published by TERI Press, printed at Rajkamal Electric Press, New Delhi, 2008, pp 925.

**Teaching Plan:**

**Week 1:** Concept of sustainability, principles, dimensions of sustainability - social, economic and technological; changing perspective, promoting sustainable development, Need, indicators and measures for sustainable development

**Week 2:** Challenges to Sustainable Development- agriculture, population, food security, public health, education, natural resources, climate change, Responses to sustainable development:

Public Policy (Community Participation and Participatory Learning), gender and human rights, technology etc.

**Week 3:** Evolution, approaches, interpretation of SDGs, overall policy environment, Relationship between energy, environment and economic development

**Week 4:** Energy budgeting of earth's atmosphere, programs and policies for energy management, Energy use and global climate change, GHG emissions, climate change debate, Legislations guiding energy sector and Energy scenario in India, Policies and practices regarding various sectors- air, water, waste, agriculture, forests and bio-diversity

**Week 5:** Policies and practices, Issues and challenges, current potential, future prospects in conventional and non-conventional energy resources -Coal and lignite, natural gas, petroleum products, nuclear energy and their environmental issues; Non-conventional energy sources - need, sources and significance- Solar thermal energy; Solar photovoltaic, bio-energy, hydroelectricity, tidal power, wind energy, wave energy, geothermal energy

**Week 6:** Need and importance of water management systems, surface and ground water management, water quality parameters, Water pollutants and their health impact

**Week 7:** Waste water management systems: techniques and technologies, Rainwater harvesting: need and principle

**Week 8:** Need and importance of waste management, quantum, classification, present scenario of disposal, technologies used for waste management, health impact, Solid waste management Policy for MSW, Biomedical waste, e-waste and other hazardous waste

**Week 9:** Energy recovery from wastes and environment – RDF, waste to energy plants etc.

**Week 10:** Environmental Impacts – examples, need for assessment, difficulties, The EIA Approach – Background, Objectives, Components & Techniques

**Week 11:** Environmental impact assessment- importance, significance, steps, procedure to be followed, role of Government and non-governmental organizations, EIA in India – Legislative aspects, Current practices & Constraints, way forward

**Week 12:** Revision and clarification of doubts

### Facilitating the achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Gain insight into the need, indicators and measures of sustainable development along with challenges and responses	Unit transaction through power point presentations	Assignments, Open book test
2	Understand and critically analyze policies and practices regarding various sectors- energy, air, water, waste, agriculture, etc.	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test
3	Gain knowledge of water management systems, water quality parameters, waste water management, rainwater harvesting	Unit transaction through power point presentations and classroom discussion using case studies	Assignments, Open book test



- Solid waste management practices/waste to energy plants/bio-medical waste management/e-waste management

**UNIT III:** Calculation of rainwater harvesting potential, roof top solar potential etc. **6**

**UNIT IV:** Developing skills in using latest techniques in EIA. **10**

**UNIT V:** Case studies on EIA for different sectors. **8**

**UNIT VI:** Field visits. **4**

**Suggested Readings:**

- Lee, N. and C. Kirkpatrick (Eds). 2000. Integrated Appraisal and Sustainable Development in a Developing World. Cheltenham, Edward Elgar.
- Ristinen, R.A. and Kraushaar, J.J. (2006). Energy and the Environment. John Wiley & Sons, Inc., USA.
- Boyle, G., Everett, B. and Ramage, J. (Editors) (2003). Energy Systems and Sustainability: Power for a Sustainable Future. Oxford University Press, UK.
- Boyle, G. (2004). Renewable Energy: Power for a Sustainable Future. Oxford University Press, UK.

**CLIMATE CHANGE & ECOSYSTEM: ISSUES & CONCERNS  
THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

**Course Objectives:**

The course aims to impart knowledge about science and policy of climate change along with climate vulnerabilities on different systems. Understanding the adaptation and mitigation strategies to deal with climate change for different sectors along with policy framework for controlling climate change will be an important aspect of the course.

**Course Learning Outcomes:**

After completing this course, students will:

1. Understand concept of climate change, components of climate change system, global warming-causes and consequences
2. Understand vulnerabilities and impact of climate change on different systems
3. Gain insight into adaptation and mitigation strategies for different sectors
4. Understand policies and programs –global and national to control climate change

**CONTENTS**

**PERIODS**

**UNIT I: Concept and science of climate change** **10**

- History and evidence of climate change
- Components of climate change system, nutrient cycles, Biosphere and geosphere
- Greenhouse effect and greenhouse gases – their sources
- Global warming- causes, consequences, greenhouse effect, GHG emissions-sources and sinks, GHG emissions-global, in developed and developing countries

## **UNIT II: Climate Change –global and regional scenario** **8**

- Natural and human induced causes of climate change
- Recent issues in climate change (ozone hole, melting of glaciers, atmospheric brown clouds)
- Global scenario, climate resilience, natural resource management, future impacts of climate change

## **UNIT III: Vulnerabilities and Impacts of climate change** **15**

- Impacts of climate change along with sectoral vulnerabilities on both natural and managed systems both present and projected on various sectors
  - ❖ Agriculture, forestry and bio-diversity
  - ❖ Human health, infrastructure, industry.
  - ❖ Water resources, sea level rise
  - ❖ Extreme events
- Adaptation options for each sector, factors affecting adaptation, strategies, constraints and consequences
- Mitigation strategies for various sectors- transport, energy, agriculture, forestry, industry, infrastructure, water resources etc., stabilisation scenario, mitigation options, programmes and initiatives, mitigation and sustainable development linkages
- Climate change mitigation programmes in energy and industry sector -: Case studies with focus on India

## **UNIT IV: Policies, approaches and programs for controlling climate change** **15**

- International efforts and policy frameworks -history, objectives, activities, equity issues, Key issues in multilateral negotiations on climate change, international protocols, role and outcomes of UNFCCC, IPCC
- India's national policy framework, NAPCC-targets and achievements, PAT (Perform, Achieve, and Trade) scheme, Forest certification (FSC, SFI, PEFC), Supply chain management for sustainable products
- CO<sub>2</sub> sequestration, forests and other sinks in India, opportunities and concerns
- The global carbon market, Carbon Pricing, Carbon Tax, Emission reduction certificates

### **Suggested Readings:**

- Meteorology Today: An Introduction to Weather, Climate, and the Environment – Ahrens, C D, Brooks Cole, 7th Ed. (2002)
- Climate Change: Causes, Effects and Solutions - Hardy, John (2003), John Wiley & Sons
- Climate change: perspectives five years after Kyoto – Velma Grover (ed.) (2004), Hamilton, Ontario, Canada, ISBN 978-1-57808-326-8
- IPCC, Assessment Reports 4 (AR4)
- Agarwal, S.K. (2003) *Environmental Scenario for 21st Century*. New Delhi: APH
- Paris Agreement (2015) [Agreement adopted on 12 December 2015 at the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change], United Nations Treaty Collection, Chapter XXVII Environment, New York, NY, United Nations

**Teaching Plan:**

**Week 1:** History and evidence of climate change, Components of climate change system, nutrient cycles, Biosphere and geosphere

**Week 2:** Greenhouse effect and greenhouse gases – their sources, Global warming- causes, consequences, greenhouse effect, GHG emissions-sources and sinks, GHG emissions-global, in developed and developing countries

**Week 3:** Natural and human induced causes of climate change

**Week 4:** Recent issues in climate change (ozone hole, melting of glaciers, atmospheric brown clouds)

**Week 5:** Global scenario, climate resilience, natural resource management, future impacts of climate change

**Week 6:** Impacts of climate change along with sectoral vulnerabilities on both natural and managed systems both present and projected on various sectors

**Week 7:** Adaptation options for each sector, factors affecting adaptation, strategies, constraints and consequences

**Week 8:** Mitigation strategies for various sectors- transport, energy, agriculture, forestry, industry, infrastructure, water resources etc., stabilisation scenario, mitigation options, programmes and initiatives, mitigation and sustainable development linkages

**Week 9:** Climate change mitigation programmes in energy and industry sector -: Case studies with focus on India

**Week 10:** International efforts and policy frameworks -history, objectives, activities, equity issues, Key issues in multilateral negotiations on climate change, international protocols, role and outcomes of UNFCCC, IPCC

**Week 11:** India's national policy framework, NAPCC-targets and achievements, PAT (Perform, Achieve, and Trade) scheme, Forest certification (FSC, SFI, PEFC), Supply chain management for sustainable products

**Week 12:** CO<sub>2</sub> sequestration, forests and other sinks in India, opportunities and concerns, The global carbon market, Carbon Pricing, Carbon Tax, Emission reduction certificates, Revision

**Facilitating the achievement of Course Learning Outcomes:**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Understand concept of climate change, components of climate change system, global warming-causes and consequences	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test
2	Understand vulnerabilities and impact of climate change on different systems	Unit transaction through power point presentations and classroom discussion using case studies	Assignments, Open book test
3	Gain insight into adaptation and mitigation strategies for different sectors	Unit transaction through power point presentations and classroom discussion using case studies	Assignments, Open book test

4	Understand policies and programs – global and national to control climate change	Unit transaction through power point presentations and classroom discussion	Class assignments and quizzes
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## **CLIMATE CHANGE & ECOSYSTEM: ISSUES & CONCERNS PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

The course aims to impart practical knowledge about issues and concerns related to climate change along with adaptation and mitigation strategies that can be taken by corporates, small and medium businesses, farmers and individual consumers. Further, it will impart skills for developing training programmes for climate change mitigation and adaptation to different sections of the population.

### **Course Learning Outcomes:**

After completing this course, students will:

1. Understand climate vulnerabilities of different regions
2. Appreciate the cause, impacts, adaptation and mitigation strategies for climate change
3. Develop skill in formulating strategies to mitigate and adapt to climate change
4. Develop skills in creating training programmes for different target groups towards reducing their carbon footprint

### **CONTENTS**

### **PERIODS**

**UNIT I:** Case studies on regional climate vulnerabilities and adaptation and mitigation strategies. **8**

**UNIT II:** Portfolio on climate change: causes, impacts, adaptation and mitigation strategies for different sectors. **10**

**UNIT III:** Appraisal of mitigation and adaptation practices to climate change through industry cluster approach. **10**

**UNIT IV:** Developing training programs for different target groups towards lifestyle changes for reducing carbon footprint. **15**

**UNIT V:** Field visits. **5**

### **Suggested Readings:**

- Low-Carbon Green Growth in Asia Policies and Practices: A Joint Study of the Asian Development Bank and the Asian Development Bank Institute. 2013.
- Pittock B (2009) Climate change: The science, impacts and solutions 2nd edition. CSIRO, Melbourne, and Earthscan, London.
- IPCC (2007) Climate Change 2007: Working Group II: Impacts, Adaptation and Vulnerability, Working Group II, Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

- Gosling (2013) The likelihood and potential impact of future change in the large-scale climate-earth system on ecosystem services.
- Kelkar, U., Bhadwal, S. (2007) South Asian Regional Study on Climate Change Impacts and Adaptation: Implications for Human Development. Human Development Report 2007/2008. Fighting Climate Change: Human Solidarity in a Divided World. Human Development Report Office, Occasional Paper.
- Kovats, S., Akhtar, R. (2008) Climate, climate change and human health in Asian cities. Environment and Urbanization 29 (1): 165-175.

## **HEALTH AND SAFETY IN BUILT ENVIRONMENT THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

The course aims to sensitize the students towards the concept of health and safety in built environment, with specific reference to indoor environment and human health risk assessment.

### **Course Learning Outcomes:**

After completing this course, students will:

1. Understand the health and safety issues in built environment with respect to indoor environmental quality
2. Develop skills to carry out risks assessment and vulnerability analysis
3. Get acquainted to environment and safety management

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Introduction to concept of built environment**

**12**

- Definition and components of built environment
- Whole house approach to built environment
- Introduction to safety and health issues in built Environment
- Impact of physical planning and zoning on health and safety

#### **Unit II: Fundamentals of the Indoor Environment**

**12**

- Indoor environment parameters: IAQ, Thermal comfort, Lighting and Acoustics
- Health and comfort in the indoor environment
- Indoor air pollution – causes, effects, prevention & control technologies
- Management of the indoor environment
- Impact of IEQ on occupants' health and productivity

#### **UNIT III: Human Health Risk Assessment (HHRA)**

**12**

- Introduction to Human Health Risk Assessment
- Steps in Human health Risk Assessment: Risk identification, Exposure Assessment, Dose-Response Relationship, Risk Communication, Quantification of Human Health Risk Assessment, Human Health Risk Assessment with respect to air, water, soil and water pollution

## UNIT IV: Environment and Safety Management

12

- Review and comparison of Global and Indian legal provisions related to Occupational Safety and Health including OSHA and Factories Act
- Introduction to HAZOP and HCCA Studies
- The Total Quality Environment Management
- Introduction to Total Productive Maintenance (TPM), Pillars of TPM

### Suggested Readings:

- Indoor Environmental Quality 1st Edition by Thad Godish
- Indoor Air Pollution, Part F, Pluschke, Peter (Ed.) (2004)
- Indoor Air Quality, Volume 3, 1st Edition, A Comprehensive Reference Book, M. Maroni B. Seifert T. Lindvall
- Sick Building Syndrome and the Problem of Uncertainty: Environmental Politics, Technoscience, and Women Workers, 2006 by Michelle Murphy
- Sick Building Syndrome in Public Buildings and Workplaces, Editors: Abdul-Wahab, Sabah A. (Ed.)

### Teaching Plan:

**Week 1:** Definition and components of built environment, Whole house approach to built environment

**Week 2:** Introduction to safety and health issues in built Environment, Impact of physical planning and zoning on health and safety

**Week 3:** Indoor environment parameters: IAQ, Thermal comfort, Lighting and Acoustics, Health and comfort in the indoor environment

**Week 4:** Indoor air pollution – causes, effects, prevention & control technologies

**Week 5:** Management of the indoor environment

**Week 6:** Impact of IEQ on occupants' health and productivity

**Week 7:** Introduction to Human Health Risk Assessment

**Week 8:** Steps in Human health Risk Assessment: Risk identification, Exposure Assessment, Dose-Response Relationship, Risk Communication, Quantification of Human Health Risk Assessment, Human Health Risk Assessment with respect to air, water, soil and water pollution

**Week 9:** Review and comparison of Global and Indian legal provisions related to Occupational Safety and Health including OSHA and Factories Act, Introduction to HAZOP and HCCA Studies

**Week 10:** The Total Quality Environment Management

**Week 11:** Introduction to Total Productive Maintenance (TPM), Pillars of TPM

**Week 12:** Revision and clarification of doubts

### Facilitating the achievement of Course Learning Outcomes:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1, 2	Understand the health and safety issues in built environment with respect to indoor environmental quality	Unit transaction through power point presentations and classroom discussion	Quizzes and objective test

3	Develop skills to carry out risks assessment and vulnerability analysis	Unit transaction through power point presentations and classroom discussion using case studies	Assignments, Open book test
4	Get acquainted to environment and safety management	Unit transaction through power point presentations and classroom discussion using case studies	Assignments, Open book test

### **HEALTH AND SAFETY IN BUILT ENVIRONMENT PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

The course aims to impart practical skills in human risk assessment and hands on training on instrumentation in Indoor Air Quality (IAQ).

**Course Learning Outcomes:**

After completing this course, students will:

1. Understand the concept of human health risk assessment
2. Develop skills in using instrumentation for assessing IAQ
3. Demonstrate skills in working on IAQ modelling and GIS mapping

**CONTENTS**

**PERIODS**

<b>UNIT I:</b> Case Studies related to Human health risk assessment.	<b>10</b>
<b>UNIT II:</b> Demonstration Session I: Hands on training on Instrumentation in IAQ.	<b>12</b>
<b>UNIT III:</b> Demonstration Session II: IAQ Model software demonstration e.g. CONTAM.	<b>10</b>
<b>UNIT IV:</b> GIS Mapping Software.	<b>10</b>
<b>UNIT V:</b> Field visits.	<b>6</b>

**Suggested Readings:**

- Sherman, E. G. Desktop GIS: Mapping the Planet with Open Source Tools 1st Edition
- Managing Indoor Air Quality, Fifth Edition 5th Edition by H.E. Burroughs, Shirley J. Hansen
- Indoor Air Quality: A Comprehensive Reference Book (Air Quality Monographs) by M. Maroni (Editor), B. Seifert (Editor), T. Lindvall (Editor)

**Post Graduate Diploma in Dietetics and Public Health Nutrition**

**Department of Home Science**

**Lady Irwin College**

**University of Delhi**

**Course Credit Structure-CBCS**

**2018**

The Department of Food and Nutrition introduced the Post Graduate Diploma In Dietetics And Public Health Nutrition in 1972.

**Vision:**

The Department of Food and Nutrition at Lady Irwin College endeavours to achieve excellence in teaching and research for outreach to the community, industry and institutions to ensure promotive health for all.

**Mission:**

The department of food and nutrition strives to achieve academic excellence in the field of nutrition research and development. The aim is to train a cadre of professionals who work as teachers, researchers, public health nutritionists, dieticians, nutrition consultants, food quality control officers and experts in the development of innovative food products. The larger objective is creation of nutrition awareness through community outreach for promotion of healthy lifestyle among the population.

**Programme Objectives (POs):**

1. To understand fundamentals of human physiology, food microbiology and nutritional biochemistry in relation to health and disease.
2. To develop understanding about nutrition in disease management, its prevention through various government programmes and policies.
3. To develop skills in food management for entrepreneurship.
4. To apply acquired skills in diet therapy, food service management, nutrition/health education and scientific writing.
5. To apply the principles of medical nutrition therapy and food service management in a hospital set up.

**Programme Specific Outcomes (PSOs):**

1. Understand fundamentals of human physiology, food microbiology and nutritional biochemistry in relation to health and disease.
2. Develop understanding about nutrition in disease management, its prevention through various government programmes and policies.
3. Develop skills in food management for entrepreneurship.
4. Apply acquired skills in diet therapy, food service management, nutrition/health education and scientific writing.
5. Apply the principles of medical nutrition therapy and food service management in a hospital set up.

**Programme Structure:**

The PGDDPHN programme is a one-year course divided into two-semester. A student is required to complete 50 credits for the completion of course and the award of degree.

Duration: 1 year    Number of Semesters: 2    Total credits: 50

<b>SEMESTER I</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 1 FNDCC 101: Advanced Nutrition	4			4
Core course 2 FNDCC 102: Therapeutic Nutrition	4	2		6
Core course 3 FNDCC 103: Public Health Nutrition	4	2		6
Core course 4 FNDCC 104: Human Physiology	4		1	5
Total credits in core course	21			
Number of elective courses	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 1 FNDEC 101: Nutrition Communication & Counseling OR FNDEC 102: Sports Nutrition & Fitness	4			4
Total credits in elective course	4			
<b>Total credits in Semester I    25</b>				

**Elective Courses: Select any one of the following:**

- FNDEC 101-Nutrition Communication & Counseling
- FNDEC 102-Sports Nutrition & Fitness

<b>SEMESTER II</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 5 FNDCC 205: Clinical Nutrition	4	2		6
Core course 6 FNDCC 206: Institutional & Hospital Food Management	4	2		6
Core course 7 FNDCC 207: Nutritional Biochemistry	4		1	5
Core course 8 FNDCC 208: Seminar and Scientific Writing	2			2
Total credits in core course	19			
Number of elective courses	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 2 FNDEC 201: Food Microbiology & Food Safety OR FNDEC 202: Policies and Programmes in Public Health Nutrition	4	2		6
Total credits in elective course	6			
<b>Total credits in Semester II 25</b>				

**Elective Courses: Select any one of the following:**

- FNDEC 201- Food Microbiology & Food Safety
- FNDEC 202- Policies and Programmes in Public Health Nutrition

# **SEMESTER I**

<b>SEMESTER I</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 1 FNDCC 101: Advanced Nutrition	4			4
Core course 2 FNDCC 102: Therapeutic Nutrition	4	2		6
Core course 3 FNDCC 103: Public Health Nutrition	4	2		6
Core course 4 FNDCC 104: Human Physiology	4		1	5
Total credits in core course	21			
Number of elective courses	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 1 FNDEC 101: Nutrition Communication & Counseling OR Sports Nutrition & Fitness	4			4
Total credits in elective course	4			
<b>Total credits in Semester I    25</b>				

# ADVANCED NUTRITION THEORY

**Marks : 100**

**Duration: 3 Hrs.**

## **Course objectives:**

To understand the biological role of different nutrients, their requirements and link these to optimal growth and development. To gain knowledge about the different methods which can be used to improve diet quality

## **Course Learning Outcomes:**

Student will be able to -

1. Understand the biological role of and sensitive methods for deriving the requirements for specific nutrients
2. Understand critical periods in growth and development and impact of malnutrition
3. Appreciate implications of poor dietary and lifestyle practices
4. Appreciate importance of nutrition immunity interactions and their operational implications
5. Comprehend the methods by which diet quality can be improved

## **CONTENTS**

## **PERIODS**

### **UNIT I: Human Nutrient Requirements**

**20**

- Historical perspective of nutrient requirements, terms used
- Methods of assessment of nutrient needs – a critical review
- Biological role, sensitive methods for derivations of requirements and recommended dietary allowances of specific nutrients
  - Energy
  - Carbohydrates and dietary fibre
  - Proteins and amino acids
  - Lipids and fatty acids
  - Water
  - Fat and water soluble vitamins
  - Minerals
- Critical evaluation of national and international nutrient allowances; factors affecting the requirements.

### **UNIT II: Growth and Development through the Life Cycle**

**10**

- Determinants of growth and development
- Changes in body composition throughout the life cycle
- Impact of altered nutrition on growth and development
- Maternal malnutrition and pregnancy outcome
- Malnutrition and cognitive development
- Changing trends in life style and dietary patterns in population groups and their implications on nutritional status and disease

### **UNIT III: Interactions of Nutrition, Immunity and Infection** **8**

- Host defense mechanisms and nutrients essential in the development of immune system
- Effect of infections on the nutritional status of an individual
- Nutrient deficiencies and excesses affecting the immuno-competence and susceptibility to infections
- Operational implications

### **UNIT IV: Improving Diet Quality** **10**

- Measurement of diet quality
- Methods of improving nutrient content and bioavailability -fortification, GM foods, dietary diversity, home based solutions
- Measurement of protein quality, factors affecting and methods of improving protein quality
- Critical evaluation of national and international dietary guidelines
- Functional foods and bioactive substances, Nutraceuticals, Nutrigenomics

#### **Suggested Readings:**

- Bamji, M.S., Krishnaswamy K. Brahmam G.N.V. Eds. (2017). *Textbook of Human Nutrition*. 4th Edition. New Delhi :Oxford and IBH Publishing Co. Pvt. Ltd.
- Cameron N. (2002). *Human Growth and Development*. USA: Academic Press, Elsevier Science.
- Chadha R., Mathur P. Eds. (2015). *Nutrition: A Lifecycle Approach*. New Delhi: Orient Blackswan.
- FAO/WHO. (2004) *Vitamin and Mineral Requirements in Human Nutrition*. Report of a Joint Expert Consultation.
- FAO/WHO/UNU (2004). *Human Energy Requirements*. Report of a Joint Expert Consultation. Rome.
- FAO/WHO/UNU (2007). *Protein and Amino acid Requirements in Human Nutrition*. Report of a joint WHO/FAO/UNU expert consultation WHO Technical Report Series 935. Geneva: WHO.
- ICMR (2010). *Nutrient Requirements and Recommended Dietary Allowances for Indians* and its revised documents. New Delhi. ICMR.

#### **Teaching Plan:**

**Week 1:** Historical perspective of nutrient requirements and definitions, critical overview of methods of assessing requirements, derivation of energy requirements

**Week 2:** Biological role and sensitive methods for derivation of requirements of carbohydrates and fats

**Week 3:** Biological role and sensitive methods for derivation of requirements of protein, vitamins D, E, K

**Week 4:** Biological role and sensitive methods for derivation of requirements of vitamin A, Thiamin, Riboflavin

**Week 5:** Biological role and sensitive methods for derivation of requirements of Niacin, Pyridoxine, Folic acid, vitamin B12

**Week 6:** Biological role and sensitive methods for derivation of requirements of Calcium, Iron, Zinc, and other trace minerals

**Week 7:** Determinants of growth and development, changes in body composition through lifecycle and impact of alterations on health

**Week 8:** Impact of malnutrition on pregnancy outcome, cognitive development, impact of nutrition transition on health

**Week 9:** Host defence mechanisms, impact of infection on nutritional status and of malnutrition on immunity

**Week 10:** Operational implications of relationship between nutrition and immunity, measurement of diet quality, dietary diversity, home based solutions, fortification

**Week 11:** Nutrigenomics, Functional foods and Nutraceuticals

**Week 12:** Dietary guidelines –critical overview, protein quality – assessment, factors affecting and improvement

**Facilitating the achievement of Course Learning Outcomes:**

<b>UNIT No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
<b>1</b>	Understand the biological role of nutrients and sensitive methods for deriving requirements	Discussion, PowerPoint presentations, Videos of methods of assessment	Class Quiz, Assignment
<b>2</b>	Understand critical periods in growth and development and impact of malnutrition	Reading of research on impact of malnutrition on growth, discussion of findings of classical studies, Power Point presentations	Class quiz
<b>3</b>	Appreciate importance of nutrition immunity interactions and their operational implications	Power Point presentation, discussion on classical studies on link of nutrition and immunity	Presentations by students on operational implications
<b>4</b>	Comprehend the methods by which diet quality can be improved	Power Point presentations, Discussion, Videos on genetic modification, nutrigenomics	Assignment on measurement of diet quality, Assignment on market survey of nutraceuticals available

# **THERAPEUTIC NUTRITION THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course objectives:**

To understand the etiology, pathophysiology and metabolic anomalies of various diseases/ disorders and provide appropriate nutrition care for its prevention and treatment

**Course Learning Outcome:**

Student will be able to-

1. Gain knowledge about the importance of nutritional assessment in the care of patients.
2. Understand the etiology, physiological and metabolic anomalies of various acute and chronic disorders / diseases.
3. Learn the effect of various disorders on nutritional status, nutritional and dietary requirements.
4. Provide medical nutritional therapy for the prevention and treatment of various diseases/ disorders.

**CONTENTS**

**PERIODS**

**UNIT I Nutritional assessment and care of patients**

**8**

- Nutrition care process
  - Nutrition care process
  - Nutritional screening and assessment of patients – out patient & hospitalized
  - Tools for screening
  - Nutritional interpretation of routine medical and laboratory data
  - Nutrition care plan and implementation
  - Monitoring and follow up
  - Ethical issues
- Dietary counseling
- Nutrition Support: Enteral nutrition

**UNIT II Medical nutrition therapy for weight management and metabolic disorders**

**16**

- Obesity and underweight
- Eating disorders
- Diabetes mellitus – Type 1, Type 2 and Gestational diabetes
- Gout

**UNIT III Coronary Heart Diseases**

**12**

Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications, treatment, MNT, dietary counselling and recent advances in

- Hypertension, dyslipidemia, atherosclerosis, metabolic syndrome, Congestive heart failure
- Cerebrovascular disease and peripheral vascular disease

## UNIT IV Gastrointestinal tract disorders

12

Etiopathophysiology, metabolic & clinical aberrations, diagnosis, complications, treatment, MNT, dietary counselling and recent advances in

- Upper and lower gastrointestinal disorders
- GERD, peptic ulcer, dumping syndrome, irritable bowel syndrome
- lactose intolerance, celiac disease, inflammatory bowel disease
- Diverticular disease, hemorrhoids

### Suggested Readings:

- Mahan, L. K. and Escott Stump. S. (2016). *Krause's Food & Nutrition Therapy* 14th ed. Saunders-Elsevier.
- Joshi Y K. (2008) *Basics of Clinical Nutrition* 2nd ed. Jaypee Brothers Medical Publishers.
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) *Modern Nutrition in Health and Disease*. 10th ed. Lipincott, William and Wilkins.
- Gibney MJ, Elia M, Ljungqvist&Dowsett J. (2005) *Clinical Nutrition. The Nutrition Society Textbook Series*. Blackwell Publishing Company.
- Garrow, J.S., James, W.P.T. and Ralph, A. (2000) *Human Nutrition and Dietetics*. 10th ed. Churchill Livingstone. Williams, S.R. (2001) *Basic Nutrition and Diet Therapy*. 11th ed. Times Mirror Mosby College Publishing.

### Teaching Plan:

**Week 1:** Nutrition care process and steps of NCP

**Week 2:** Dietary Counselling, Enteral Nutrition

**Week 3:** Medical Nutrition Therapy in Obesity

**Week 4:** Medical Nutrition Therapy in Underweight, Eating disorders

**Week 5:** Medical Nutrition Therapy in Diabetes mellitus: type1 and type 2 diabetes

**Week 6:** Medical Nutrition Therapy in Diabetes mellitus: GDM, Gout

**Week 7:** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Hypertension, dyslipidemia, atherosclerosis

**Week 8:** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Metabolic syndrome, congestive heart failure

**Week 9:** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Peripheral and cerebrovascular disease

**Week 10:** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in GERD, peptic ulcer, dumping syndrome

**Week 11:** Etiopathophysiology, metabolic & clinical aberrations, diagnosis, Complications and recent advances in prevention, treatment, MNT and dietary counseling in Irritable bowel syndrome, lactose intolerance, celiac disease Complications and MNT and dietary counseling in

**Week 12:** Inflammatory bowel disease, diverticular disease, hemorrhoids

**Facilitating the achievement of Course Learning Outcomes:**

<b>UNIT No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
<b>1</b>	Gain knowledge about the importance of nutritional assessment in the care of patients.	Discussion	Assignment on nutritional assessment and care of patients.
<b>2</b>	Understand the etiology, physiological and metabolic anomalies of various acute and chronic disorders / diseases.	Discussion	Assignment on etiology, pathophysiology and metabolic changes in various disorders
<b>3</b>	Learn the effect of various disorders on nutritional status, nutritional and dietary requirements.	Discussion	Assignment on nutritional status
<b>4</b>	Provide medical nutritional therapy for the prevention and treatment of various diseases/ disorders	Discussion	Assignment on role of diet in prevention and management of the diseases/ disorders

**THERAPEUTIC NUTRITION  
PRACTICAL****Marks: 50****Duration: 3 Hrs.****Course Objectives:**

To perform nutritional assessment of patients, plan and prepare suitable therapeutic diets based on patient needs and provide dietary counseling for prevention/ treatment of various diseases/ disorders.

**Course Learning outcomes:**

Student will be able to-

1. Perform nutritional assessment of patients
2. Plan and prepare suitable therapeutic diets based on patient needs
3. Provide dietary counseling for prevention/ treatment of various diseases/ disorders

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT 1:</b>	<b>1</b>
• Assessment of patient needs – nutritional assessment and screening	
<b>UNIT II:</b>	<b>11</b>
• Planning and preparation of diets for following diseases	
○ Obesity	
○ Underweight	
○ Type 1 diabetes	
○ Type 2 diabetes	
○ Gestational Diabetes	
○ Hypertension and dyslipidemia	
○ Metabolic syndrome	
○ Congestive heart failure	
○ Ulcerative colitis	
○ Diverticular disease	
○ Lactose intolerance	
○ Celiac disease	

**Suggested Readings:**

- Gibney MJ, Elia M, Ljungqvist & Dowsett J. (2005) *Clinical Nutrition*. The Nutrition Society Textbook Series. Blackwell Publishing Company.
- Gibson SR. (2005). *Principles of Nutritional Assessment*. 2nd ed. Oxford University press.
- Joshi YK. *Basics of Clinical Nutrition*. 2nd ed. Jaypee Brothers Medical Publishers.
- Lee RD & Neiman DC. (2009). *Nutritional Assessment*. 5th ed. Brown & Benchmark.
- Mahan, L. K. and Escott Stump. S. (2016) *Krause's Food & Nutrition Therapy* 14th ed. Saunders-Elsevier.
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) *Modern Nutrition in Health and Disease*. 10th ed. Lipincott, William and Wilkins.
- Williams, S.R. (2001) *Basic Nutrition and Diet Therapy*. 11th ed. Times Mirror Mosby College Publishing.

**PUBLIC HEALTH NUTRITION  
THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To familiarize the students with the concept of Public Health Nutrition and food security. It will also expose the students to the national health care delivery system. The students will acquire knowledge about the various methods of nutritional assessment and public health aspects of malnutrition.

## Course Learning Outcomes:

Student will be able to -

1. Become familiar with the concept of public health nutrition.
2. Get exposure to the national healthcare delivery system.
3. Acquire knowledge about assessment of nutritional status of individuals and community.
4. Understand the public health aspects of malnutrition in the community.
5. Understand the concept of food and nutrition security.

## CONTENTS

## PERIODS

### UNIT I: Public Health Nutrition

10

- Aim, scope and content of Public Health Nutrition
- Role of Public Health Nutritionist in National development
- Health – definition, dimensions, determinants and indicators
- National Health Care Delivery System - Health care of the community, Health care systems

### UNIT II: Assessment of Nutritional Status of Individual and Community

12

- Meaning and significance of nutritional status assessment
- Methods of nutritional assessment: Anthropometry, Biochemical and Biophysical methods, clinical methods, dietary intake and ecological variables including socio-cultural, biologic, environmental and economic, and vital health statistics
- Errors in methods of assessing nutritional status
- Rapid assessment procedures for community nutrition assessment

### UNIT III: Public Health Aspects of Undernutrition

12

- Etiology, clinical features, public health implications, preventive strategies for:
  - Chronic Energy Deficiency/ Protein Energy Malnutrition and Severe Acute Malnutrition
  - Micronutrient deficiencies - Vitamin A deficiency, Nutritional Anemias, Iodine deficiency disorders, Vitamin D deficiency and Osteoporosis, Zinc Deficiency

### UNIT IV: Public Health Aspects of Lifestyle related disorders

8

- Public Health implications and preventive strategies for: Obesity, Hypertension, Cardiovascular diseases, Diabetes

### UNIT V: Food and Nutrition Security

6

- Concepts and definitions of food and nutrition security at the national, regional, household and individual levels
- Impact of food production, losses, distribution, access, availability, consumption on food and nutrition security

## Suggested Readings:

- *Community based Management of children with severe acute malnutrition, Operational & Technical guidelines* (2012). Ministry of health & Family Welfare, Nirman Bhawan, New Delhi

- Dietary Guidelines for Indians. (2011). *Dietary Guidelines for Indians: A manual* (2nd ed.) second edition , NIN.
- Gibney, M.J., Margetts, B.M., Kearney, J.M. Arab, I. (Eds.) (2004). *Public Health Nutrition*. NS Blackwell Publishing. .
- IFCT (2017). *Indian food composition tables*. NIN.
- Jelliffe, D. B., & J elliffe, E.F.P. (1989). *Community Nutritional Assessment*. Oxford University Press.
- *Management of SAM children through medical nutrition therapy* (2009). Vol I & II. National Consensus Workshop. Published by DBT. Ministry of Science & Technology. Government of India and ICMR, New Delhi
- Owen, A.Y, & Frankle, R.T. (1986). *Nutrition in the Community: The Art of Delivering Services* (2nd ed.) Times Mirror/Mosby.
- Park, K. (2017) *Park's Textbook of Preventive and Social Medicine*. 24th ed. Jabalpur M/s. Banarsidas Bhanot.
- Ross, A.C. (2012). *Nutrition in health and disease*. (Eds) Lippincott Williams & Wilkins.
- Shils, M.E. (1998). *Nutrition in health and disease*. (Eds) Lippincott Williams & Wilkins.
- Vir, S. (2011). *Public health nutrition in developing countries Part-1 & 2*. Woodhead Publishing India limited.
- Wadhwa, A. & Sharma, S. (2003). *Nutrition in the Community*. A text book.
- SCN News, UN ACC/SCN Subcommittee on Nutrition.
- WHO (2006). *WHO Child growth standards: Length/height for age, weight for age, weight for length, weight for height and body mass index* (2006). Available at [http:// www.who.int](http://www.who.int).
- WHO (2007). *WHO Reference Data for Children and Adolescents (5-19 years)*. WHO reference. Available at <http://www.who.int/growthref/en/>
- WHO (2009). *WHO Child growth standards: Growth velocity based on weight, length and head circumference* Available at [http://www. who.int](http://www.who.int)
- *WHO child growth standards and identification of severe acute malnutrition in infants and children*, Joint statement - Child Growth Standards for SAM children (2009)
- *WHO Guidelines for Inpatient treatment for SAM child* (2003). Available at <http://www.who.int/nutrition/publications/severemalnutrition/9241546093/en/>

### **Teaching Plan:**

**Week 1:** Concept of public health nutrition, Aim and scope of Public Health Nutrition

Role of Public Health Nutritionist in National development Health - definition, dimensions

**Week 2:** Health - determinants and indicators, Health care of the community

**Week 3:** Health care systems, Meaning and significance of nutritional status assessment

Methods of nutritional assessment: Anthropometry

**Week 4:** Methods of nutritional assessment: Biochemical and Biophysical methods, clinical methods, dietary intake

**Week 5:** Methods of nutritional assessment: ecological variables including socio-cultural, biologic, environmental and economic, and vital health statistics

Errors in methods of assessing nutritional status

**Week 6:** Rapid assessment procedures for community nutrition assessment

Etiology, clinical features, public health implications, preventive strategies for: Chronic Energy Deficiency/ Protein Energy Malnutrition and Severe Acute Malnutrition

**Week 7:** Etiology, clinical features, public health implications, preventive strategies for: Severe Acute Malnutrition, Vitamin A deficiency, Nutritional Anemias

**Week 8:** Etiology, clinical features, public health implications, preventive strategies for: Nutritional Anemias, Iodine deficiency disorders

**Week 9:** Etiology, clinical features, public health implications, preventive strategies for: Vitamin D deficiency and Osteoporosis, Zinc Deficiency

Public Health implications and preventive strategies for: Obesity

**Week 10:** Public Health implications and preventive strategies for: Hypertension, Cardiovascular diseases

**Week 11:** Public Health implications and preventive strategies for: Diabetes

Food and Nutrition Security: Concepts and definitions of food and nutrition security at the national, regional, household and individual levels

**Week 12:** Impact of food production, losses, distribution, access, availability, consumption on food and nutrition security

**Facilitating the achievement of Course Learning Outcomes:**

<b>UNIT No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching And Learning Activity</b>	<b>Assessment Tasks</b>
<b>1</b>	Become familiar with the concept of public health nutrition.  Get exposure to the national healthcare delivery system.	Lecture-cum-Discussion	Assignment/ Test
<b>2</b>	Acquire knowledge about assessment of nutritional status of individuals and community.	Lecture-cum-Discussion, Demonstration	Assignment/ Test
<b>3</b>	Understand the public health aspects of malnutrition in the community.	Lecture-cum-Discussion	Student Presentations/ Assignment/ Test
<b>4</b>	Understand the concept of food and nutrition security	Lecture-cum-Discussion	Assignment/ Test

**PUBLIC HEALTH NUTRITION  
PRACTICAL**

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To acquire skills in nutritional assessment, plan and prepare low cost nutritious dishes and menus for vulnerable groups, plan and prepare low cost nutritious dishes and menus for PEM and become familiar with the national health care delivery system

**Course Learning Outcomes:**

Student will be able to-

1. Acquire skills in nutritional assessment
2. Plan and prepare low cost nutritious dishes and menus for vulnerable groups
3. Plan and prepare low cost nutritious dishes and menus for PEM
4. Familiarize with the national health care delivery system

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT 1:</b> <ul style="list-style-type: none"><li>• Assessment of nutritional status – diet survey, anthropometry, clinical</li></ul>	<b>3</b>
<b>UNIT II:</b> <ul style="list-style-type: none"><li>• Rapid assessment procedures – focus group discussions, in-depth interviews, mapping to study health behavior, food habits and dietary patterns</li></ul>	<b>3</b>
<b>UNIT III:</b> <ul style="list-style-type: none"><li>• Planning and preparation of diet for PEM</li></ul>	<b>2</b>
<b>UNIT IV:</b> <ul style="list-style-type: none"><li>• Development of low cost recipes for infants and preschoolers</li></ul>	<b>3</b>
<b>UNIT V:</b> <ul style="list-style-type: none"><li>• Field visit to Primary Health Centre</li></ul>	<b>1</b>

**Suggested Readings:**

- Dietary Guidelines for Indians (2011). *Dietary Guidelines for Indians: A manual*. Second edition, NIN.
- IFCT (2017). *Indian Food Composition Tables*, NIN.
- WHO (2006). *WHO Child growth standards: Length/height for age, weight for age, weight for length, weight for height and body mass index* (2006). Available at <http://www.who.int>.
- WHO (2007). *WHO Reference Data for Children and Adolescents (5-19 years)*. WHO reference. Available at <http://www.who.int/growthref/en/>

- WHO (2009). *WHO Child growth standards: Growth velocity based on weight, length and head circumference* Available at <http://www.who.int>
- Khanna, K, Gupta, S, Sethi, R, Mahna, R, Rekhi, T (2004). *The Art and science of cooking-A Practical Manual*. Elite Publishing House Pvt. Ltd.
- Chadha R, Mathur, P, 2015. *Nutrition A life cycle Approach*. Orient BlackSwan Pvt. Ltd., Lady Irwin College.
- Raina U, Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (2010) *Basic food preparation*. (4th ed.) Lady Irwin College.

## HUMAN PHYSIOLOGY THEORY

**Marks: 100**

**Duration: 3 Hrs.**

### Course Objectives:

To understand the normal functioning of various organ systems of the body and their interactions and to be able to comprehend the pathophysiology of commonly occurring diseases

### Course Learning Outcomes:

Student will be able to -

1. Understand the current state of knowledge about the functional organization of the human body.
2. Develop insight of normal functioning of all the organ systems of the body and their interactions.
3. Comprehend the pathophysiology of commonly occurring diseases.
4. Correlate physiology with various disorders and their pathogenesis.

## CONTENTS

## PERIODS

### UNIT I: Blood and Cardio-Thoracic Physiology

**16**

- Blood and Plasma Protein -Composition and Function
- Blood formation and factors controlling Erythropoiesis.
- Pathophysiology of Anaemia and Jaundice
- Cardiac cycle, Cardiac output ,Heart sounds
- E.C.G. & its interpretation, Heart rate & regulation
- Blood pressure, Hypertension
- Coronary Artery Disease
- Hemorrhage; Compensatory changes after hemorrhage
- Transport and exchange of gases
- Control of Respiration and Respiratory function tests
- Lung volume & Capacities and COPD

### UNIT II: Excretory Physiology and Exercise Physiology

**8**

- Urine formation
- Renal function tests
- Acid Base balance
- Pathophysiology of Renal Stones, Urinary Tract Infection, Glomerulonephritis
- Concept of Fitness, Adaptations to exercise
- Energy Metabolism in Sports
- Overview of Diet and Physical Performance

### **UNIT III: Gastrointestinal Physiology**

**12**

- Functions of Stomach, Liver, Pancreas and Gall Bladder
- Composition ,function and regulation of :
  - Salivary juice
  - Gastric juice
  - Pancreatic juice
  - Bile juice
  - Intestinal juice
  - GI hormones
- Pathophysiological overview of some common diseases in relation to Gastrointestinal Tract (Peptic ulcer/GERD, Cholelithiasis, Portal Hypertension, Fatty liver and Liver Cirrhosis)

### **UNIT IV: Neuro-Endocrine and Reproductive Physiology**

**12**

- Overview of organization of nervous system
  - Effects of Pituitary, Thyroid, Parathyroid, Adrenal and Pancreatic hormones
  - Pathophysiology of Diabetes Mellitus, Metabolic Syndrome, Hashimoto's disease. Tetany and Cushing Syndrome
  - Physiology of Menstruation and Menopause
  - Physiology of Ageing
  - Physiology of Pregnancy, Lactation
  - Pathophysiology of PCOD and Infertility

### **UNIT V: Clinical Physiology: Evaluation/Interpretation of various physiological parameters in health and disease through simulated patient case profiles and case studies**

**12**

#### **Suggested Readings:**

- Ganong W.F.(2003) *Review of Medical Physiology*.21st ed. McGraw Hill.
- Guyton A.C. and Hall J.E.(2000) *Textbook of Medical Physiology*.10th ed. India: Harcourt Asia..
- Tortora G.J and Grabowski S.R.(2000) *Principles of Anatomy and Physiology*.9th ed. John Wiley and Sons.Inc.
- West J.B.(1996). *Physiological Basis of Medical Practice*.12th Edition. B. I. Waverly Pvt. Ltd.
- Marieb E.N(2001) *Human Anatomy and Physiology* (5th ed)Pearson Education ,Inc, publishing as Benjamin Cummings.

- Jain A. K (2014) *Human Physiology for BDS*(5<sup>th</sup> ed), Publisher: Avichal Publishing Company; ISBN: 9788177394337 .
- Pal G.K and Pal Pravati (2016) *Comprehensive Textbook Of Medical Physiology* (2Vols) Publisher: Jaypee Brothers Medical Pub (P) Ltd. ) ISBN: 5551234080758
- *Manual of Practical Physiology for MBBS* (2017) 5 edition; Jain A.K. Publisher: Arya Publications,India.
- *Text book of Practical Physiology* (2010) 3rd edition. Paul G.K. Publisher: Universities Press (India) Limited.
- *Medical Laboratory Technology - a Procedure Manual for Routine Diagnostic Tests Vol. I* (2010), Mukherjee, K.L., Tata Mc Graw–Hill Publishing Company Limited (New Delhi). ISBN:9780070076594 / ISBN:9780070076631
- *Medical Laboratory Technology - a Procedure Manual for Routine Diagnostic Tests Vol. II* (2010), Mukherjee, K.L., Tata Mc Graw – Hill Publishing Company Ltd. (New Delhi), ISBN: 9780070076648.

### Teaching Plan:

**Week 1:** Blood and Plasma Protein -Composition and Function, Blood formation and factors controlling Erythropoiesis, Pathophysiology of Anaemia and Jaundice

**Week 2:** Cardiac cycle, Cardiac output ,Heart sounds, E.C.G. & its interpretation, Heart rate & its regulation

**Week 3:** Blood pressure, Hypertension, Coronary Artery Disease, Hemorrhage, Compensatory changes after hemorrhage

**Week 4:** Transport and exchange of gases, Control of Respiration and Respiratory function test, Lung volume & Capacities and COPD

**Week 5:** Urine formation , Renal function tests, Acid Base balance, Pathophysiology of Renal stones, Urinary Tract Infection, Glomerulonephritis

**Week 6:** Concept of Fitness, Adaptations to exercise, Energy Metabolism in Sports, Overview of Diet and Physical Performance

**Week 7:** Functions of Stomach, Liver, Pancreas and Gall Bladder, Composition ,function and regulation of Salivary juice, Gastric juice

**Week 8:** Pancreatic juice, Bile juice Intestinal juice; GI hormones

**Week 9:** Pathophysiological overview of some common diseases in relation to Gastrointestinal Tract: Peptic ulcer/GERD, Cholelithiasis, Portal Hypertension, Fatty liver and Liver Cirrhosis

**Week 10:** Overview of organization of nervous system, Physiology of Ageing

**Week11:** Effects of Pituitary, Thyroid, Parathyroid, Adrenal and Pancreatic hormones, Pathophysiology of Diabetes Mellitus, Metabolic Syndrome, Hashimoto’s disease, Tetany and Cushing Syndrome

**Week 12:** Physiology of Menstruation and Menopause, Physiology of Pregnancy, Lactation Pathophysiology of PCOD and Infertility,

### Facilitating the Achievement of Course Learning Outcomes:

Unit.No	Course Learning	Teaching and	Assessment Tasks
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	<b>Outcomes</b>	<b>Learning Activity</b>	
<b>1</b>	Understand the structural and functional organisation of Cardiothoracic System	Measurement of Pulse, BP and Oxygen Saturation	Recording of BP by using a Sphygmomanometer, Use of Pulse Oximeter
<b>2</b>	Understand the structural and functional Organisation Of GIT	Study of permanent slides of GI organs	Histological features of Stomach, Small and Large intestine Liver
<b>3</b>	Comprehend the Structural and Functional organization of Genitourinary System	Study of permanent slides of Genitourinary Tract, Renal Function tests	Histological features of Nephron and Kidney, Dipstick method of urine test for albumin and sugar, Study of Biochemical reports and interpretation with respect to RFT.
<b>4</b>	Appreciate the Structural and Functional organization of Neuroendocrine System	Measurement of Blood Sugar	Use of Glucometer, HbA1c values Interpretation of OGTT

## **NUTRITION COMMUNICATION AND COUNSELING THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To understand the influence of counseling on disease management and identify components of counseling skills, impart knowledge of the processes of nutrition communication and counseling and provide skills of counseling for specific disease conditions.

### **Course Learning Outcomes:**

Student will be able to -

1. Understand the importance of BCC in managing nutrition related problems
2. Draw out a complete counseling plan for individuals based on their physiological conditions using the appropriate tools
3. Understand how best to maintain adherence to changed dietary practices for specific physiological conditions
4. Gain knowledge on traditional and alternate methods to manage disorders

## CONTENTS

## PERIODS

### **UNIT I: Basics of Diet Counseling**

**14**

- Concept and importance of counseling in the nutrition care process
- Traditional, Current and Emerging methods/tools of counseling
- Skills and attributes of a counselor
- Barriers to effective communication
- Understanding dietary patterns and food choices and their impact on counseling
- Behaviour Change Communication and Models for behaviour change
- Counseling strategies

### **UNIT II: Processes involved in dietary counseling:**

**8**

- Managing resources of the communicator/counselor
- Designing of counseling plans – goals & objectives, evaluation instruments.
- Implementation: facilitating self-management of disease condition
- Evaluation: evaluating adherence to dietary changes
- Counseling approaches after evaluation

### **UNIT III: Dietary counseling through the life span**

**20**

- Considerations for counseling plans for:
  - Prenatal and pregnant women
  - Lactating women
- Childhood nutrition problems like:
  - SAM, weight management, vitamin and mineral deficiencies
- School children, adolescents, young adults
  - Fitness, weight management, eating disorders
- Managing diet related chronic diseases in adults:
  - Obesity
  - Diabetes
  - dyslipidemia
  - hypertension
  - cancer risk prevention
  - renal disease
  - liver disorders
- Geriatric counseling

### **UNIT IV: Nutritional/medicinal role of traditional foods, traditional food beliefs**

**6**

- Role of Ayurveda, Naturopathy, Yoga and other traditional medicines in disease management

### **Suggested Readings:**

- Mahan, L. K. and Escott Stump. S. (2016) Krause's Food & Nutrition Therapy 14th ed. Saunders-Elsevier

- Snetselaar L. (2009). Nutrition Counseling Skills for the Nutrition Care Process. Fourth Ed. Sudbury, Massachusetts: Jones Bartlett Publishers.
- Holli B Betsy and Beto A Judith. (2014). Nutrition Counseling and Education Skills for Dietetics Professionals. Sixth edition. USA: Lippincot Williams and Wilkins; Wolters Kluwer.
- Gable J. (2016). Counseling Skills for dietitians. Florida, USA: JohnWiley and Sons.
- Midwinter R and Dickson J.(2015). Embedding Counseling and Communication Skills. A Relational Skills Model.Routledge
- Devito Joseph A. (2015) Human Communication: The Basic Course. New York:Pearson
- King K and Klawitter B.(2007). Nutrition Therapy. Advanced Counseling Skills. Third Edition. Philadelphia, USA: Lippincot Williams and Wilkins; Wolters Kluwer.
- <http://www.fao.org/docrep/X2550E/X2550e04.htm>

**Teaching Plan::**

**Week 1:** Basics of Diet Counseling, Concept and importance of counseling in the nutrition care process, Traditional, Current and Emerging methods/tools of counseling

**Week 2:** Skills and attributes of a counselor Barriers to effective communication

**Week 3:** Understanding dietary patterns and food choices and their impact on counseling Behavior Change Communication and Models for behavior change

**Week 4:** Behavior Change Communication and Models for behavior change

Counseling strategies Processes involved in dietary counseling:Managing resources of the communicator/counselor

**Week 5:** Designing of counseling plans – goals & objectives, evaluation instruments.

Implementation: facilitating self-management of disease condition Evaluation: evaluating adherence to dietary changes

**Week 6:** Counseling approaches after evaluation Considerations for counseling plans for: Prenatal and pregnant women

**Week 7:** Considerations for counseling plans for: Lactating women and Childhood nutrition problems like SAM, weight management, vitamin and mineral deficiencies

**Week 8:** Considerations for counseling plans for: School children, adolescents, young adults: fitness, weight management, eating disorders and Obesity

**Week 9:** Considerations for counseling plans for: Diabetes and dyslipidemia

**Week 10:** Considerations for counseling plans for: hypertension and cancer risk prevention

**Week 11:** Considerations for counseling plans for: renal disease, liver disorders and geriatric counseling

**Week 12:** Nutritional/medicinal role of traditional foods: traditional food beliefs, role of Ayurveda, Naturopathy, Yoga and other traditional medicines in and disease management

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning	Teaching and	Assessment Tasks
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	<b>Outcomes</b>	<b>Learning Activity</b>	
<b>1</b>	To understand the concept of BCC in nutrition	Discussion	Group discussions on theories of BCC
<b>2</b>	Draw out a complete counseling plan for individuals based on their physiological conditions using the appropriate tools	Discussion on overall plan with case studies	Practical preparation of counselling plans for a hypothetical situation
<b>3</b>	Understand how best to maintain adherence to changed dietary practices for specific physiological conditions	Discussion on case studies for each condition	Student presentations and assignments, case studies
<b>4</b>	To gain knowledge on traditional and alternate methods to manage disorders	Discussion	Group discussions on various alternate methods of medicine in India

### **SPORTS NUTRITION AND FITNESS THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

**Course Objectives:**

To develop knowledge and skills of Sports Nutrition care integrated with other important aspects for recreational and competitive athletes and to develop concepts of components of fitness and skills required for assessment and improvement of physical fitness. It will also facilitate conceptual understanding and application of the energy systems, macro- and micro-nutrients, supplements and fluid recommendations for sports performance and develop critical analytical skills of athletes' nutritional needs with respect to phases of training and competition.

**Course Learning outcomes:**

Student will be able to-

1. Exhibit knowledge of the components of fitness, its assessment and training for improvement.
2. Exhibit knowledge of the energy systems of exercise and its continuum in various sports.
3. Successfully plan, implement and monitor sport-specific diets for athletes through all age

groups for recreational and competitive athletes.

4. Chalk out plans for provision of nutritional care to recreational and competitive athletes integrating diet plans with nutrition education/extension services and counselling to special groups of athletes.

## CONTENTS

## PERIODS

### UNIT I: Introduction to physical fitness and Sports Nutrition

10

- Definition & components of physical fitness
- Methods of assessing physical fitness
- Approaches to achieving physical fitness through the life cycle
- Introduction to Sports nutrition
- Integrated approach to care for athletes

### UNIT II: Energy systems and fuel for exercise and sports

10

- Energy systems for physical activity and sports
- Continuum of energy
- fuel utilization for different sports
- Target sports-diets , macro- and micro-nutrient recommendations for sports performance

### UNIT III: Nutritional Recommendations for high performance athletes

20

- National Recommendations and nutritional guidelines for different categories of high performance sports
- Nutritional care for Training and day-today recovery
- Nutrition for the Pre-competition, Competition and post competition recovery phase
- Supplements in Sport :performance enhancing substances ,drugs, ergogenic aids and herbs in sports performance
- Nutrition for athletes with special needs: vegetarianism, special Olympics, Paralympics

### UNIT IV: Weight management in sports

8

- Approaches to weight reduction, in weight category sports
- Gain in LBM for athletic performance
- Management of eating disorders in sports

### Suggested Readings:

- ILSI, NIN &SAI. (2017). *Nutritional recommendations for high performance athletes* (2nd ed.).
- Joshi S. (2010). *Diet and Nutrition*. 1st ed, publishers Tata McGraw Hill.
- Mahan, L. K. and Escott Stump S. (2016). *Krause's Food & Nutrition Therapy* (14th ed.) Saunders-Elsevier.
- Hickson JF and Wolinsky I. (1997). *Nutrition for exercise and Sport* 2nd ed.CRC Press.
- Burke LM and Deakin V. (2002). *Clinical Sports Nutrition* 2nd edition, Publishers McGraw Hill.

- Dan Benardot. (2011). *Advanced Sports Nutrition*. (2nd ed.).
- Fink H H and Mikesky A E. (2017). *Practical Applications in Sports Nutrition* (5<sup>th</sup> ed.).
- Bushman B. ACSM's *Complete Guide to Fitness & Health*. (2nd ed.) Published by ACSM.

**Teaching Plan:**

**Week 1:** Definition of physical fitness, Components of physical fitness, Methods of assessing physical fitness

**Week 2:** Approaches to achieving physical fitness through the life cycle, Introduction to Sports Nutrition

**Week 3:** Integrated approach to care for athletes, Energy systems in exercise and sport, Continuum of energy

**Week 4:** Fuel utilization for different sports

**Week 5:** Target sports-diets , macro- and micro-nutrient recommendations for sports performance

**Week 6:** National Recommendations and nutritional guidelines for different categories of high performance sports

**Week 7:** Nutritional care for Training and day-today recovery

**Week 8:** Nutrition for the Pre-competition, Competition and post competition recovery phase

**Week 9:** Supplements in Sport :performance enhancing substances ,drugs, ergogenic aids and herbs in sports performance

**Week10:** Nutrition for athletes with special needs: vegetarianism, different types of Olympics

**Week 11:** Approaches to weight reduction, in weight category sports, Gain in LBM for athletic performance

**Week 12:** Management of eating disorders in sports

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Develop concepts of physical fitness and Sports Nutrition. Be aware of the components of physical fitness, skills in assessment and exercises to improve physical fitness	Various fitness exercises and assessments in groups	Assessment scores of partners' physical fitness, Test on the topic
2	Exhibit knowledge of energy systems in sports, fuel for different sports	Demonstration, and discussion	Test on knowledge domain, Assessment using skills learnt-case study
3	Develop in- depth understanding and critically evaluate and apply nutritional recommendations for different categories athletes and special needs, during various phases and a comprehensive view on	Presentations, hand outs discussions and surveys	Class assignments, scrap books, survey reports and diet plans

	supplements in Sport		
<b>4</b>	Gain comprehensive knowledge on the needs of weight management in sports and skills on how to manage it.	Discussion and case studies	Diet plans for athletes to manage their weight especially for weight category sports

## **SEMESTER II**

<b>SEMESTER II</b>				
Number of core courses	Credits in each core course			
Course	Theory	Practical	Tutorial	Credits
Core course 5 Clinical Nutrition	4	2		6
Core course 6 Institutional & Hospital Food Management	4	2		6
Core course 7 Nutritional Biochemistry	4		1	5
Core course 8 Seminar and Scientific Writing	2			2
Total credits in core course	19			
Number of elective courses	Credits in each Elective course			
Credits in each elective course	Theory	Practical	Tutorial	Credits
Elective course 2 Food Microbiology & Food Safety OR Policies and Programmes in Public Health Nutrition	4	2		6
Total credits in elective courses	6			
<b>Total credits in Semester II    25</b>				

## **CLINICAL NUTRITION THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To understand the etiology, physiological and metabolic anomalies and provide appropriate nutrition care for prevention and treatment of various disorders / diseases

### **Course Learning Outcomes:**

Student will be able to -

1. Develop a detailed understanding of the etiology, physiological and metabolic anomalies of various acute and chronic disorders / diseases.
2. Demonstrate competency in nutrition assessment and diet history interview skills
3. Develop understanding and expertise on the effect of various disorders on nutritional status, nutritional and dietary requirements.
4. Use critical thinking and clinical reasoning to develop nutritional care plan for prevention and treatment of various disorders / diseases.
5. Apply the knowledge to plan medical nutritional therapy for treatment of various disorders/ diseases.

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I: Nutrition Care</b>	<b>4</b>
• Nutrition Support – Parenteral Nutrition	
<b>UNIT II: Hepatobiliary and Pancreatic Disorders</b>	<b>14</b>
• Etiopathophysiology, metabolic & clinical aberrations, Complications, treatment, MNT	
• Nonalcoholic fatty liver disease (NAFLD), Cirrhosis, End stage liver disease (ESLD), Encephalopathy, Liver transplant; Cholecystitis, Cholelithiasis, Pancreatitis	
<b>UNIT III: Diseases of Heart and Blood Vessels</b>	<b>5</b>
• Etiopathophysiology, metabolic & clinical aberrations, complications, prevention, treatment and MNT	
• Myocardial Infarction, angioplasty, heart transplant	
<b>UNIT IV: Metabolic stress and Cancer</b>	<b>6</b>
• Metabolic & clinical aberrations, complications, treatment and MNT	
• Metabolic Stress -Surgery, Burns and Sepsis, Cancer	
<b>UNIT V: Renal Disorders</b>	<b>16</b>

- Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in
  - Nephrotic Syndrome, Glomerulonephritis, Acute Renal Failure, Chronic Kidney Disease, End Stage Renal Disease (ESRD), Dialysis, Transplant, Renal Stones.

#### **UNIT VI: Neurological disorders**

**3**

- Etiopathophysiology, complication, prevention, treatment, MNT in
  - Alzheimer's disease, Parkinson disease

#### **Suggested Readings:**

- Mahan, L. K. and Escott Stump. S. (2016) *Krause's Food & Nutrition Therapy*. Saunders-Elsevier
- Joshi Y K. (2008) *Basics of Clinical Nutrition*. Jaypee Brothers Medical Publishers
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) *Modern Nutrition in Health and Disease*. (10th ed.) Lipincott, William and Wilkins.
- Gibney MJ, Elia M, Ljungqvist & Dowsett J. (2005) *Clinical Nutrition*. The Nutrition Society Textbook Series. Blackwell Publishing Company
- Garrow, J.S., James, W.P.T. and Ralph, A. (2000) *Human Nutrition and Dietetics*. 10th ed. Churchill Livingstone.
- Marian M, Russel M, Shikora SA. (2008) *Clinical Nutrition for Surgical Patients*. Jones and Bartlett Publishers.

#### **Teaching Plan:**

**Week 1:** Nutritional support- Parental nutrition

**Week 2:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in Nonalcoholic fatty liver disease (NAFLD), Cirrhosis

**Week 3:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in :End stage liver disease (ESLD), Encephalopathy

**Week 4:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: Pancreatitis, Liver transplant, Cholecystitis

**Week 5:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: Cholelithiasis, Myocardial infarction, angioplasty, heart transplant

**Week 6:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: Heart transplant (cont), surgery, burn

**Week 7:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: Cancer, Sepsis

**Week 8:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: Nephrotic syndrome, Glomerulonephritis

**Week 9:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: Acute Renal Failure, Chronic Kidney Disease, ESRD

**Week 10:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: ESRD, Dialysis

**Week 11:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: Renal Transplant, Renal Stones

**Week 12:** Etiopathophysiology, metabolic & clinical aberrations, complications, treatment, MNT in: Alzheimer's disease, Parkinson disease

### Facilitating the achievement of Course Learning Outcomes

Unit.No	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Develop a detailed understanding of the etiology, physiological and metabolic anomalies of various acute and chronic disorders / diseases	Discussion	Assignment on etiology, physiological and metabolic anomalies of various acute and chronic disorders / diseases
2	Demonstrate competency in nutrition assessment and diet history interview skills	Discussion	Assignment and practice interactive sessions in nutrition assessment and diet history interview skills
3	Develop understanding and expertise on the effect of various disorders on nutritional status, nutritional and dietary requirements	Discussion	Assignment on various disorders on nutritional status, nutritional and dietary requirements
4	Use critical thinking and clinical reasoning to develop nutritional care plan for prevention and treatment of various disorders / diseases	Discussion	Diet plans for prevention and treatment of various disorders / diseases
	Apply the knowledge to plan medical nutritional therapy for treatment of various disorders/ diseases.	Discussion	Planning medical nutritional therapy of nutritionally vulnerable individuals using best evidence.

### CLINICAL NUTRITION PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

**Course Objectives:**

To enable students to develop skill in nutritional diagnosis, planning and providing suitable preventive/ therapeutic diets for various diseases / disorders

**Course Learning Outcomes:**

Student will be able to -

1. Develop skill in nutritional diagnosis, planning and providing suitable preventive/ therapeutic diets for various diseases / disorders.
2. To provide effective dietary counseling for these disorders.
3. To be aware of various commercial nutritional therapeutic products available in the market.

**CONTENTS**

**PERIODS**

**UNIT I: Market Survey for commercial nutritional therapeutic products** **1**

**UNIT II: Planning & preparation of diets for the following conditions:** **11**

- Post burn
- Liver Cirrhosis
- Hepatic Encephalopathy
- Pancreatitis
- Myocardial infarction
- Nephritis
- Acute Renal Failure
- Chronic renal failure
- Patients on dialysis

**Suggested Readings:**

- Dorland WA Newman. (2003) *Dorland's Illustrated Medical Dictionary*. 30th ed. WB Saunders Co.
- Escott-Stump, S. (2002) *Nutrition and Diagnosis Related Care*. 5th ed. Williams and Wilkins.
- Garrow, J.S., James, W.P.T. and Ralph, A. (2000) *Human Nutrition and Dietetics*. (10th ed.) Churchill Livingstone.
- Mahan, L. K. and Escott Stump. S. (2016) *Krause's Food & Nutrition Therapy* 14th ed. Saunders-Elsevier.
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) *Modern Nutrition in Health and Disease*. (10th ed.) Lipincott, William and Wilkins.
- Mahan, L. K. and Escott Stump. S. (2016) *Krause's Food & Nutrition Therapy*. (14th ed.) Saunders-Elsevier.
- Joshi Y K.(2008) *Basics of Clinical Nutrition* 2nd ed. Jaypee Brothers Medical Publishers.
- Williams, S.R. (2001) *Basic Nutrition and Diet Therapy*. (11th ed.) Times Mirror Mosby College Publishing.
- Davis, J. and Sherer, K. (1994) *Applied Nutrition and Diet Therapy for Nurses*. (2nd ed). W. B. Saunders Co.
- Fauci, S.A et al (1998) *Harrison's Principles of Internal Medicine* 14th ed. McGraw Hill.

- Guyton, A.C and Hall, J.E. (2000) *Textbook of Medical Physiology*. (10th ed.) India: Harcourt Asia.
- Ritchie, A.C (1990) *Boyd's Textbook of Pathology*. (9th ed.) Lea and Febiger, Philadelphia
- World Cancer Research Fund & American Institute for cancer research (2007) *Food, Nutrition, Physical Activity and the Prevention of Cancer- A Global Perspective*. Washington E.D. WCRF.
- Gibson SR. (2005). *Principles of Nutritional Assessment*. (2nd ed.) Oxford University press.
- Gibney MJ, Margetts BM, Kearny JM & Arab I. (2004). *Public Health Nutrition*. NS Blackwell publishing.
- Gibney MJ, Elia M, Ljungqvist & Dowsett J. (2005). *Clinical Nutrition*. The Nutrition Society Textbook Series. Blackwell publishing Company.
- Marian M, Russel MK, Shikora SA. (2008). *Clinical Nutrition for Surgical Patients*. Jones & Bartlett Publisher.

## **INSTITUTIONAL AND HOSPITAL FOOD MANAGEMENT THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To develop knowledge in managing food service in a different institutions and healthcare set up and to equip individuals in managing resources in a food service institution.

### **Course Learning Outcomes:**

Student will be able to -

1. Steer expertise to function as a food service manager.
2. Develop knowledge in managing food service in a healthcare set up.
3. Understand and manage resources in a food service institution.
4. To provide practical experience in managing food material for food service management.

## **CONTENTS**

## **PERIODS**

### **UNIT I: Organization and Management**

**9**

- Management Theories: Classical, Scientific, Systems approach, MBO, JIT, TQM, QWL
- Tools of Management
- Tangible Tools: Organization chart, Job description, Job specification, Job analysis: Path way chart, Process chart, Work schedule, Production schedule, Staff and service analysis, Budget
- Intangible tools: Communication, Leadership, Decision making

### **UNIT II: Hospital food service Management**

**7**

- Meal Ordering System (manual, electronic)
- Patient menu construction

- Menu card/ display
- Food production processes for various situations
- Guidelines of regulatory bodies

### **UNIT III: Institutional Resource Management**

24

- Personnel Management
  - Functions of a personnel manager, absenteeism, labour turnover
  - Recruitment and selection process - Process and Sources-Internal and External, Process interview, Tests
  - Orientation and Training- Importance of orientation and training, content of programme, Steps of developing an Orientation programme, Types of training - OJT, Group; continuous training, training for development, Developing a training programme
  - Appraisal of employees – Importance, Methods, Limitation
  - Motivating employees- Motivation theories and approaches -Content theories: Maslow, Herzberg, McClelland; Process theories: Vroom, Equity; Reinforcement theory; Techniques of motivating employees
  - Employee behavior and policies
- Financial and Marketing
  - Managing finances in a catering establishment
  - Records: Menu, Purchase, Store, Production, Sales, Personnel, Utilities
  - Reports : Cost analysis: Concept of Trial Balance, Profit and Loss Account
    - Marketing techniques and strategies
- Equipments and Layouts in Food Service UNITs
  - Types of equipments
  - Steps in layout planning and architectural features
  - Feasibility assessment in terms of layout planning

### **UNIT IV: Food safety and Hygiene**

8

- HACCP
- GMP,GHP
- Food safety and standard regulations
- Food Safety in different food service units (Hospitals and other catering establishments)

#### **Suggested Readings:**

- West B Bessie & Wood Levelle (1988) *Food Service in Institutions* 6<sup>th</sup> Edition Revised By Hargar FV, Shuggart SG, & Palgne Palacio June, Macmillian Publishing Company New York.
- Sethi Mohini (2005) *Institution Food Management*. New Age International Publishers
- Kazarian E A ( 1977) *Food Service facilities Planning*. 3rd Edition Von Nostrand Reinhold New York.
- Kotas Richard & Jayawardardene. C (1994) *Profitble Food and Beverage Management*. Hodder & Stoughton Publications
- Kotler Philip (2001) *Marketing management Millennium* Edition Prentice Hall of India
- Taneja S and Gupta SL (2001) *Entrepreneurship Development*. Galgotia Publishing

- Dessler Gary ( 2007) *Human Resource Management* 11th edition Prentice Hall New Jersey
- Luthans Fred (2004) *Organisational Behaviour* 10th Edition Mc Graw Hill International

**Teaching Plan:**

**Week 1:** Classical, Scientific, Systems approach, Management by Objectives, Just-in Time, Total Quality Management, Quality of Work Life, Tools of management (Introduction)

**Week 2:** Tools of management: Tangible Tools: Organization chart, Job description, Job specification, Job analysis: Path way chart, Process chart, Work schedule, Production schedule, Staff and service analysis, Budget

**Week 3:** Intangible tools: communication, leadership, decision making, food production cycle in various institutions: meal ordering system (manual, electronic)

**Week 4:** Hospital Food service Management: Meal ordering system, menu construction, menu card/ display, food production processes for various situations

**Week 5:** Hospital Food service Management: Guidelines of regulatory bodies, Institutional Resource Management.

**Week 6:** Manpower: Orientation and Training; Appraisal of employees – Importance, Methods, Limitation

**Week 7:** Manpower: Motivation theories and approaches; Employee behavior and policies

**Week 8:** Finance and Marketing: Managing finances in a catering establishment; Records: Menu, Purchase, Store, Production, Sales, Personnel, Utilities

**Week 9:** Finance and Marketing: Reports, Cost analysis

**Week 10:** Equipment and Layouts in food service UNITs Types of equipment, Steps in layout planning and architectural features

**Week 11:** Equipment and Layouts in food service UNIT Feasibility assessment in terms of layout planning, Food safety and hygiene: HACCP, Good Manufacturing Practices (GMP), and Good Hygiene Practices (GHP)

**Week 12:** Food safety and hygiene: FSSA 2006, Food safety in hospital and other different food service units

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Develop insight about basic concept of catering management	Discussion	Assignment on various theories of management
2	Understand manage food service in healthcare	Discussion, visits to healthcare system	Report of the visits
3	Understand resource management in a food	Discussion	Assignment on collecting information on various

	service unit		resources in management
<b>4</b>	Develop insight of new laws and regulation in food safety for food service units	Discussions	Assignment

## **INSTITUTIONAL AND HOSPITAL FOOD MANAGEMENT PRACTICAL**

**Marks : 50**

**Duration: 3 Hours**

### **Course Objectives:**

To develop skills in menu planning, quantity food production for various food service organizations within specific budgets.

### **Course Learning Outcomes:**

Student will be able to-

1. Understand the operations of food service units.
2. Develop insight about products and their price in market.
3. Develop skills in planning menus for various food service organizations within specific budgets.
4. Application of acquired skills in menu planning and quantity food production

### **CONTENTS**

### **PERIODS**

**UNIT I: Market survey of various food products raw and processed in different kind of markets** **1**

**UNIT II: Planning menus for the following:** **2**

- Conference
- Food stall

**UNIT III: Planning menu and adjusting nutrients and cost for the following:** **3**

- Food items for MDM
- Cyclic menu for hospital (government/private)

**UNIT IV: Standardization and quantity cooking** **4**

- Canteen project

## UNIT V: Developing a checklist for Hospital personnel in hygiene and sanitation 2

### Suggested Readings:

- West B Bessie & Wood Levelle (1988) *Food Service in Institutions* 6<sup>th</sup> Edition Revised By Hargar FV, Shuggart SG, & Palgne Palacio June, Macmillian Publishing Company New York.
- Sethi Mohini (2005) *Institution Food Management*. New Age International Publishers
- Kazarian E A ( 1977) *Food Service facilities Planning*. 3rd Edition Von Nostrand Reinhold New York.
- Kotas Richard & Jayawardardene. C (1994) *Profitble Food and Beverage Management*. Hodder & Stoughton Publications
- Taneja S and Gupta SL (2001) *Entrepreneurship Development*, Galgotia Publishing

## NUTRITIONAL BIOCHEMISTRY THEORY

**Marks: 100**

**Duration: 3 Hrs.**

### Course Objectives:

To augment the biochemistry knowledge acquired at the undergraduate level and to understand the basic genetics, carbohydrate, lipid and amino acid metabolism

### Course Learning Outcomes:

Student will be able to-

1. Having coherent and systematic knowledge on carbohydrate, lipid and amino acid metabolism.
2. Understanding the mechanism adopted by the human body for regulation of metabolic pathways.
3. Learning basics of DNA, RNA and translation
4. Understanding the roles of various minerals.

### Contents

### PERIODS

#### UNIT I: Carbohydrates

12

- Structures- monosaccharides (glucose, fructose, maltose, galactose); disaccharides (sucrose, maltose, lactose); Polysaccharides (starch and glycogen)
- Glycolysis and gluconeogenesis and their regulation
- Citric acid cycle and its regulation
- Glycogenolysis
- Blood sugar regulation by insulin, glucagon and epinephrine
- Pentose phosphate pathway

**UNIT II: Lipids** **12**

- Classification of lipids
- $\beta$ -oxidation
- De novo synthesis of fatty acids and their elongation
- Ketosis
- Fatty liver
- Lipoproteins – types, synthesis, degradation and clinical significance
- Cholesterol – synthesis and regulation

**UNIT III: Proteins** **10**

- Structures of amino acids
- Protein structure
- Transamination of amino acids
- Biosynthesis of Urea

**UNIT IV: Nucleic Acids** **10**

- Structure of Nucleotides.
- Basic structure of nucleic acids (DNA & RNA)
- Genetic code
- Genetic mutations
- Protein biosynthesis

**UNIT V: Minerals** **4**

- Overview of biochemical role of macro and micro minerals (calcium, phosphorous, iodine, selenium, zinc)
- Metabolism of iron in human body

**UNIT VI: Clinical Biochemistry: Evaluation/Interpretation of various biochemical parameters changes in diseases (*Information obtained from pathological laboratory on blood and serum analysis tests*)** **12**

**Suggested Readings:**

- Berg JM, Stryer L, Tymoczko JL and Gatto GJ. (2015) *Biochemistry* 8<sup>th</sup> ed. W.H. Freeman.
- Devlin TM. (2010) *Text Book of biochemistry with Clinical Correlations* 7<sup>th</sup> ed. John Wiley and Sons.
- Rodwell VW, Bender DA, Botham KM, Kennelly PJ and Weil PA. (2015) *Harper's Illustrated Biochemistry*. 30<sup>th</sup> ed. McGraw-Hill. Asia.
- Nelson DL and Cox MM. (2017) *Principles of Biochemistry*. 7<sup>th</sup> ed. W.H. Freeman.
- Voet D and Voet JG. (2004) *Biochemistry* 3rd ed. John Wiley and Sons.
- Medical Laboratory Technology - a Procedure Manual for Routine Diagnostic Tests Vol. I (2010), Mukherjee, K.L., Tata Mc Graw–Hill Publishing Company Limited (New Delhi). ISBN:9780070076594 / ISBN:9780070076631
- Medical Laboratory Technology - a Procedure Manual for Routine Diagnostic Tests Vol. II (2010), Mukherjee, K.L., Tata Mc Graw – Hill Publishing Company Ltd. (New Delhi), ISBN: 9780070076648.

- Medical Biochemistry (2005) 2nd ed., Baynes, J.W. and Dominiczak, M.H., Elsevier Mosby Ltd. (Philadelphia), ISBN:0-7234-3341-0.

**Teaching Plan:**

**Week 1:** Structures- monosaccharides (glucose, fructose, maltose, galactose); disaccharides (sucrose, maltose, lactose); Polysaccharides (starch and glycogen), Glycolysis and its regulation

**Week 2:** Citric acid cycle and its regulation, Gluconeogenesis

**Week 3:** Glycogenolysis, Blood sugar regulation by insulin, glucagon and epinephrine

**Week 4:** Pentose phosphate pathway, Classification of lipids,  $\beta$ -oxidation

**Week 5:** De novo synthesis of fatty acids

**Week 6:** Lipoproteins – types, synthesis, degradation and clinical significance

**Week 7:** Cholesterol – synthesis and regulation, Structures of amino acids

**Week 8:** Protein structure, Transamination of amino acids

**Week 9:** Biosynthesis of Urea, Structure of Nucleotides

**Week 10:** Basic structure nucleic acids (DNA & RNA); Genetic code

**Week 11:** Genetic mutations, Protein biosynthesis

**Week 12:** Overview of biochemical role of macro and micro minerals (calcium, phosphorous, iodine, selenium, zinc), Metabolism of iron in human body

**Facilitating the achievement of Course Learning Outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Carbohydrate structures, major carbohydrate metabolic pathways, blood sugar regulation	Classroom lectures, Discussion on important discoveries in metabolism	Short assignment and quiz
2	Classification of lipids, lipid metabolism, lipoproteins and cholesterol biosynthesis	Classroom lectures,	Test
3	Structure of amino acids and proteins, biosynthesis of urea	Classroom lectures, short presentations,	Assignment
4	Structure of nucleotides and nucleic acids, ketosis, protein biosynthesis	Classroom lectures, short presentations	Test and quiz
	Overview of biochemical roles of minerals	Classroom lectures,	Oral test

## **SEMINAR AND SCIENTIFIC WRITING THEORY**

**Marks : 50**

**Duration: 3 Hrs.**

### **Course objectives:**

To develop preliminary insight for research papers and comprehend a scientific paper's objectives, results and its application in Indian context to develop skills in presenting a scientific paper.

### **Course Learning Outcomes:**

Student will be able to-

1. Develop preliminary insight for research papers.
2. Comprehend a scientific paper's objectives, results and its application in Indian context.
3. Acquire skills in presenting a scientific paper.

### **CONTENT**

### **PERIODS**

- Scientific report development and Presentation of the reviews on upcoming nutrition and food science advances **24**

## **FOOD MICROBIOLOGY AND FOOD SAFETY THEORY**

**Marks: 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To provide theoretical and practical knowledge about the micro-organisms involved in the food spoilage, infections and intoxications. The course also enables to understand the concept of preservation and microbiological safety in various food operations.

### **Course Learning Outcomes:**

Student will be able to -

1. Understand the nature of microorganisms involved in food spoilage, food infections and intoxications.
2. Comprehend principles of various preservation and control techniques.
3. Understand microbial safety in various foods operations.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: Basic Microbiology**

**13**

- Introduction to microbiology
- Characteristics of microorganisms

- Factors effecting microbial growth

**UNIT II: Food Spoilage and Preservation** **12**

- Food spoilage
- Principles and methods of food preservation

**UNIT III: Beneficial Role of Food Microbes in Health** **4**

- Importance of normal flora, prebiotics and probiotics
- Fermentation
- Single cell proteins
- Fermented food products

**UNIT IV: Food Borne Microbial Diseases** **7**

- Public health hazards: Food borne infections and intoxications
- Symptoms, mode of transmission and methods of prevention
- Emerging food pathogens

**UNIT V: Food Safety and Quality Control** **14**

- Food safety and quality
- Food hazards
- Concept of risk analysis
- Concept of Food Safety Management System, GHP and GMP
- HACCP, ISO 22000
- Accreditation and Auditing
- Food Laws, Regulations and Standards

**Suggested Readings:**

- Frazier, W.C. & Westoff, D.C. (2013). *Food Microbiology. 5<sup>th</sup> edition*. Tata McGraw-Hill Publishing Co. Ltd.
- Garbutt, J. (1997). *Essentials of Food Microbiology*. Arnold London.
- Jay, J.M., Loessner, D.A. & Martin, J. (2006). *Modern Food Microbiology. 7<sup>th</sup> edition*. Springer
- Banwart, G.J. (2004). *Basic Food Microbiology. 2<sup>nd</sup> edition*. CBS Publishers and Distributors, India.
- Pelczar, M.J., Chan, E.C.S., Krieg, N. (1993). *Microbiology. 5<sup>th</sup> edition*. Tata McGraw-Hill Publishing Co. Ltd.
- Prescott, L.M., Harley, J.P. & Klein, D.A. (2017). *Microbiology. 10<sup>th</sup> edition*. Tata McGraw-Hill Publishing Co. Ltd.
- Mathur, P. (2018). *Food Safety and Quality Control. 1<sup>st</sup> Edition*. Orient Blackswan Private Ltd. India.
- Forsythe, J.S. (2011). *The Microbiology of Safe Food. 2<sup>nd</sup> Edition*. Wiley-Blackwell Publishing.
- Ravishashankar, R. & Jamuna, B. (2015). *Microbial Food Safety and Food Preservation*. CRC Press, Boca Raton.

- *Manual of Methods of Analysis of Foods- Microbiological Testing.* (2012). Lab Manual 14. FSSAI, GoI, New Delhi.

**Teaching Plan:**

**Week 1:** Introduction to Microbiology

**Week 2:** Characteristics of Micro-organisms

**Week 3:** Factors affecting growth of Micro-organisms

**Week 4:** Food spoilage

**Week 5:** Methods of food preservation

**Week 6:** Beneficial role of food microbes

**Week 7:** Food infection and Intoxication, symptoms and mode of transmission

**Week 8:** Food borne illnesses

**Week 9:** Emerging food pathogens

**Week 10:** Food safety and quality and food hazards

**Week 11:** Concept of risk analysis and FSMS

**Week 12:** Accreditation, Auditing, National and International food laws and standards

**Facilitating the achievement of course learning outcomes:**

Unit.No	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1	Basic Microbiology	Understand the nature of various groups of micro-organism, their morphology, extrinsic and intrinsic factors affecting their growth.	Simple staining and Differential staining, Quizzes, Assignments
2	Food Spoilage and Preservation	Understand the nature of micro-organism involved in food spoilage	Analysis using MBRT, MPN, TPC, Quizzes, Assignments
3	Beneficial role of Food Microbes in Health	Understand the beneficial role of food microbes used for fermentation etc.	Analysis of Curd, and Probiotic count, Quizzes, Assignments
4	Food Borne Microbial Diseases	Understand the role of microbes in causing public health hazard due to food contamination	Swab Test, Ringers Test. Personal hygiene assessment, Quizzes, Assignments

	Food Safety and Quality Control	Acquaint with various laws and microbiological standards to be maintained during food processing, HACCP, GMP, FSSAI, CODEX	Adulteration test for various food products, Quizzes, Assignments
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## FOOD MICROBIOLOGY AND FOOD SAFETY PRACTICAL

**Marks: 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

To familiarize with the techniques and methods used for cultivation, purification and identification of microbes

### **Course Learning Outcomes:**

Student will be able to-

1. Understand the morphology and structural features of various micro-organisms.
2. Comprehend various techniques used for isolation, purification and controlling the growth of micro-organisms
3. Assess the microbial safety of personal hygiene, water, milk and other food products.

### **CONTENTS**

### **PERIODS**

#### **UNIT I: To Study Morphology and Structural Features of Various Micro-organisms** **2**

- Simple staining
- Differential staining

#### **UNIT II: To Study the Various Techniques and Instruments Used in Microbiology** **3**

- Sterilization and Disinfection
- Filtration, biosafety cabinets
- Chemical methods (Ethanol and Antibiotics)

#### **UNIT III: Isolation of Microorganisms** **2**

- Pure Culture Technique
- Standard Plate Count Method

#### **UNIT IV: Microbiological Analysis For** **5**

- Water (Most Probable Number)
- Milk (Methylene Blue Reduction Test)
- Curd and probiotic count

- Adulteration test for various food products

## **UNIT V: Assessment of Sanitation and Hygiene**

**2**

- Swab and Rinse technique
- Assessment of personal hygiene

### **Suggested Readings:**

- Bell, C., Neaves, P. & Williams, A.P. (2005). *Food Microbiology and Lab Practice*. Wiley Press.
- Yousef, A.L. (2003). *Food Microbiology. A Laboratory Manual*. Wiley Inter-Science New Jersey.
- Benson, H.J. (2002). *Microbiological Application*. 8th Edition. Tata McGraw Hill.
- Mortimore & Wallace. (2013). *HACCP: A Practical Approach*. 3rd Edition. Springer Publication.
- Cappuccino & Sherman. (2007). *Microbiology: A laboratory Manual*. 7th Edition. Pearson Education Inc.
- Hoorfar, J. (2011). *Rapid Detection, Characterization and Enumeration of Food Borne Pathogens*. American Society for Microbiology, Washington, USA.
- *Drinking Water Specification- Indian Standard*. (2012). 2nd Revision. IS 10500:2012. Bureau of Indian Standard, Manak Bhawan, New Delhi, India.
- *Manual of Methods of Analysis of Foods- Microbiological Testing*. (2012). Lab Manual 14. FSSAI, GoI, New Delhi.

## **POLICIES AND PROGRAMMES IN PUBLIC HEALTH NUTRITION THEORY**

**Marks : 100**

**Duration: 3 Hrs.**

### **Course Objectives:**

To familiarize with the government policies and programmes based on various approaches for improving nutritional and health status of the community. It will also expose them to the concept of nutritional surveillance and the process of programme planning in public health nutrition.

### **Course Learning Outcomes:**

1. Become familiar with the various approaches and strategies for improving nutritional and health status.
2. Get exposure to various Government policies and programmes aimed at improving the nutritional and health status of the population
3. Acquire knowledge about the process of planning public health nutrition programmes

**CONTENTS**

**PERIODS**

**UNIT I: Approaches and Strategies for Improving Nutritional and Health Status** **14**

- Health based interventions including immunization, provision of safe drinking water/sanitation, prevention and management of diarrhoeal diseases
- Food based interventions including fortification, use of biotechnology, supplementary feeding
- Education based interventions including growth monitoring and promotion, communication for health and nutrition behaviour change

**UNIT II: National Policies for Promotion of Nutrition and Health Status of the Population** **10**

- National Nutrition Policy and National Nutrition Mission
- National Food Security Act
- National Health policy
- Population policy
- National water policy
- National Urban Sanitation Policy

**UNIT III: National Nutrition and Health Programmes** **12**

- Components, administration and evaluation of programmes for prevention and control of micronutrient deficiencies and improving food and nutrition security

**UNIT IV: Nutritional Surveillance** **4**

- Objectives, initial assessment indicators for use in nutrition surveillance
- Nutritional surveillance for programme planning: Triple A approach

**UNIT V: Programme Planning** **8**

- Diagnosis of situation, setting of objectives, suitability and relative costs of various strategies, implementation, monitoring and evaluation

**Suggested Readings:**

- Gibney M.J., Margetts, B.M., Kearney, J.M. Arab, I. eds (2004) *Public Health Nutrition*, NS Blackwell Publishing.
- National Nutrition Policy, GOI, New Delhi, 1993
- Owen, A.Y. and Frankle, R.T. (1986) *Nutrition in the Community*. The Art of Delivering Services, 2nd ed. Times Mirror/Mosby.
- Park, K. (2017) *Park's Textbook of Preventive and Social Medicine*, 24th ed. Jabalpur M/s. Banarsidas Bhanot.
- Vir, S. (2011). *Public health nutrition in developing countries Part-1 & 2*. Woodhead Publishing India limited.
- Wadhwa, A. and Sharma, S. (2003) *Nutrition in the Community*. A textbook. SCN News, UN ACC/SCN Subcommittee on Nutrition

**Teaching Plan:**

**Week 1:** Health based interventions including immunization, provision of safe drinking water/sanitation, prevention and management of diarrhoeal diseases

**Week 2:** Food based interventions including fortification, use of biotechnology, supplementary feeding

**Week 3:** Education based interventions including growth monitoring and promotion, communication for health and nutrition behaviour change

**Week 4:** Education based interventions including growth monitoring and promotion, communication for health and nutrition behaviour change , National Nutrition Policy, National Nutrition Mission

**Week 5:** National Nutrition Mission, National Food Security Act, National Health policy

**Week 6:** Population Policy, National water policy, National Urban Sanitation Policy

**Week 7:** Components, administration and evaluation of programmes for prevention and control of micronutrient deficiencies

**Week 8:** Components, administration and evaluation of programmes for prevention and control of micronutrient deficiencies and improving food and nutrition security

**Week 9:** Components, administration and evaluation of programmes for improving food and nutrition security

**Week 10:** Nutritional Surveillance: Objectives, initial assessment indicators for use in nutrition surveillance, Nutritional surveillance for programme planning: Triple A approach

**Week 11:** Program Planning: Diagnosis of situation, setting of objectives, suitability and relative costs of various strategies

**Week 12:** Program Planning: implementation, monitoring and evaluation

**Facilitating the Achievement of Course Learning Outcomes:**

<b>UNIT No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching And Learning Activity</b>	<b>Assessment Tasks</b>
<b>1.</b>	Become familiar with the various approaches and strategies for improving nutritional and health status	Lecture-cum-Discussion	Assignment/ Test
<b>2, 3 &amp; 4</b>	Get exposure to various Government policies and programmes aimed at improving the nutritional and health status of the population	Lecture-cum-Discussion, Films on national programmes	Assignment/ Test, Student Presentations
<b>5</b>	Acquire knowledge about the process of planning public health nutrition programmes	Lecture-cum-Discussion	Assignment/ Test, Student Presentations

**POLICIES AND PROGRAMMES IN PUBLIC HEALTH NUTRITION**

## PRACTICAL

**Marks : 50**

**Duration: 3 Hrs.**

### **Course Objectives:**

To plan and prepare cyclic menu/ low cost nutritious dishes for vulnerable groups for nutritional improvement of the community and to become familiar with ongoing national nutrition programmes.

### **Course Learning Outcomes:**

Student will be able to-

1. Plan and prepare cyclic menu/ low cost nutritious dishes for vulnerable groups
2. Familiarize with ongoing national nutrition programmes
3. Plan and implement interventions for nutritional improvement of the community

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I: Planning and preparation of cyclic menu for a school feeding programme</b>	<b>3</b>
<b>UNIT II: Field visit to ongoing National Nutrition Programmes</b>	<b>1</b>
<b>UNIT III: Development of a plan for nutrition education programme in community.</b>	<b>4</b>
• Preparation of communication aids for different groups. Implementation of programme in community	
<b>UNIT IV: Development of low cost recipes for elementary school children, adolescents, pregnant and lactating mothers</b>	<b>4</b>

### **Suggested Readings:**

- *Basic food preparation* (2010), Fourth edition, Lady Irwin College.
- Chadha R, Mathur, P, 2015. *Nutrition A life cycle Approach*. Orient BlackSwan Pvt. Ltd., Lady Irwin College.
- Dietary Guidelines for Indians (2011). *Dietary Guidelines for Indians: A manual*. Second edition, NIN
- IFCT (2017). *Indian Food Composition Tables*, NIN.
- Khanna, K, Gupta, S, Sethi, R, Mahna, R, Rekhi, T. (2004). *The Art and science of cooking- A Practical Manual*. Elite Publishing House Pvt. Ltd.

### **INTERNSHIP**

- A three month internship in a tertiary hospital is compulsory at the end of the course, for successful completion of the course and for awarding the degree by the University.

**Post Graduate Diploma in Health and Social Gerontology**

**Department of Home Science**

**Lady Irwin College**

**University of Delhi**

**Course Credit Structure-CBCS**

**2018**

## **Introduction**

With the increasing focus on elderly in national policy and program planning, there will be a greater demand for trained professionals to work in areas of training, research and welfare of older persons. With more funding from the Government, greater numbers of non governmental agencies and community based organizations will work with senior citizens and hence need trained personnel in this area.

Increasing number of hospitals are getting geriatric wards and clinics. Besides geriatric wards in hospitals, old age homes and similar institutions, newer models of old age care are emerging in India. Residential care tailored to needs of the senior citizens, assisted living and day care facilities are increasingly being offered by the private sector. Specialised leisure, travel and entertainment, hospitality, food and infrastructure services catering to older adults are also emerging as potential business models.

## **Learning Outcomes**

Gerontology is an upcoming and growing area; thus after completing the Post graduate Diploma in Health and Social Gerontology, the participants will be able to:

1. Engage in direct services for older adults like old age homes, residential and day care facilities, rehabilitation services in the government and private sector
2. Initiate and sustain research, training, welfare programmes and services for Older Adults
3. Be active members of inter-disciplinary teams working with Older Adults in hospitals, institutions and the community
4. Supervise and train field functionaries especially paraprofessionals and volunteers
5. Actively contribute to the work of NGOs, CBOs, both national and international working in this area.
6. Initiate entrepreneurial ventures in care of elderly

## **Semester 1:**

<b>Course</b>	<b>Name</b>	<b>Theory Credits</b>	<b>Practical Credits</b>	<b>Total credits</b>
Core 1	Sociology and Psychology of Aging	4	2	6
Core 2	Physiological and Clinical Aspects of Aging	4	2	6
Core 3	Aging and the Built Environment	4	2	6
Core 4	Policies, Programmes and Services for Older Adults	4	-	4
Elective 1	i. Management and Rehabilitation of Older Adults With Special Needs OR ii. Collective Action, Advocacy, Networking for Older Persons	4	-	4
				26

## Semester 2:

### Semester I

<b>Course</b>	<b>Name</b>	<b>Theory Credits</b>	<b>Practical Credits</b>	<b>Total credits</b>
Core 5	Basics of Research Methods, Statistics and Scientific Writing	4	-	4
Core 6	Nutrition and Aging	4	2	6
Core 7	Organization and Management of Institutions and Services for older adults	4	2	6
Elective 2	i. Health Promotion in Older Persons OR ii. Counseling and Family therapy for elderly	4	2	6
	Project/ Field Placement	2		2
				24

# CORE 1: SOCIOLOGY AND PSYCHOLOGY OF AGING

## THEORY

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

### Course Objective:

The psychosocial changes an individual experiences in the process of Aging have a strong impact on his/her overall sense of health and well-being. The way an Older Adult perceives himself/herself influences the way in which he/she regards the Aging process. The student will understand that each individual has a unique personality as also differing life circumstances and hence there are a variety of ways of adapting to old age.

### Course Learning Outcomes:

The student will be able to -

- Understand the nature of psychosocial changes an individual undergoes with advancing age
- Gain an insight about the implications of this aspect of Aging on an individual, the family and the society

## CONTENTS

## PERIODS

### Unit I: Psycho Social Aspects of Aging

**10**

- Developmental Stages of Late Adulthood
- Developmental tasks
- Physical and Physiological Changes
- Theories of Aging: Activity theory, Disengagement theory, Modernizing theory
- Relevance of theories to working with Older Adults

### Unit II: Socio-emotional Changes

**10**

- Theoretical perspectives: Erikson's theory; Levinson's theory

- Role of family: Changing family and kinship structure; Role expectations; transitions in roles and relationships; generation gap; intergenerational relationships
- Self Concept and Self esteem: Changing scenario in the Indian Context and Changing in self and coping strategies
- Parenting and Grand parenting: Role of the elderly; Role of Children; Role of grandchildren
- Retirement: Preparation for retirement; Issues in re-employment; Readjustment and redefining roles

**Unit III: Vulnerability in the Older Adult** **10**

- Marginalization due to class, caste, gender, migration, occupation and disability

**Unit IV: Death and Dying** **10**

- Bereavement; stages of bereavement; coping strategies; loneliness; preparation for death

**Unit V: Gerontological Counseling** **8**

- Basic principles
- Concept, Meaning, scope and Applications
- Assessment in Family Therapy: Family Tree, Time Lines and Genograms

**Suggested Readings:**

1. Sasser, J. and Moody, H. (2018). *Gerontology: The basics*. Routledge.
2. Quadagno, J, S. (2017). *Aging and the life course: An introduction to Social Gerontology* (7<sup>th</sup> Ed). McGrawHill College.

**PRACTICAL**

**Duration: 3 hours**

**Maximum marks: 50**

**Teaching Periods: 4/week (1 practical)**

**Teaching Load: 12 Practical /semester**

I. Methods of studying the elderly

- Interview, questionnaire, case study, FGD

II. Case study

III. Caregiver Interventions

IV. Counseling: Assessment in Family Therapy

## **CORE 2: PHYSIOLOGICAL AND CLINICAL GERONTOLOGY THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

### **Course Objectives:**

The course aims to provide to provide a foundation of the fundamental concepts and terminology of Aging and age related diseases. It helps to develop conceptual clarity about the nature of anatomical and physiological changes an individual undergoes with advancing age. The course provides an insight about the implications of these on the functional ability, clinical profile and quality of life of an Aging individual. It promotes critical thinking about aging research and anti-Aging interventions in laboratory animals and humans which may slow down the Aging process

### **Course Learning Outcomes:**

Student will be able to -

Understand fundamental concepts and terminology of Aging and age related diseases.

Explain how human organ systems function and how they become dysregulated with advancing age.

Gain an insight about the implications of Aging on the functional ability, clinical profile and quality of life of an Aging individual.

Promote critical thinking about aging research and anti-aging interventions which may slow down the Aging process.

<b>CONTENTS</b>	<b>PERIODS</b>
<b>UNIT I: Concept of Aging</b>	<b>8</b>
<ul style="list-style-type: none"><li>• Concept of Healthy Aging</li><li>• Biological theories of Aging</li><li>• Distinction between Normal and Pathological Patterns of Aging</li><li>• Factors affecting Healthy Aging</li></ul>	
<b>UNIT II: Assessment of Aging</b>	<b>4</b>
<ul style="list-style-type: none"><li>• Concept and Components of ‘Activities of Daily Living’ (ADL) and ‘Quality of Life’ (QOL); ‘Quality of Life Index’ (QOLI): Health-related Quality of Life (HRQoL), Quality Adjusted Life Years (QUALY) and Disability Adjusted Life Years (DALY).</li><li>• Geriatric assessment- need, Components, tools and techniques of: anthropometric assessment, biochemical assessment, functional ability and physical health assessment and clinical assessment.</li></ul>	
<b>UNIT III: Process of Aging</b>	<b>12</b>
<ul style="list-style-type: none"><li>• Causes and Consequences of Aging</li><li>• Cardiovascular and respiratory Aging</li><li>• Renal and Reproductive Aging</li><li>• Gastrointestinal Aging</li><li>• Cerebro-vascular Aging</li><li>• Sensory Aging</li></ul>	
<b>UNIT IV: Clinical aspects of Aging</b>	<b>24</b>
<ul style="list-style-type: none"><li>• Degenerative disorders: etiology, pathophysiology, clinical and biochemical manifestations, treatment and prevention<ul style="list-style-type: none"><li>- Disability : Hearing and Vision Impairment, Dental and Speech impairment</li><li>- Orthopaedic disorders Arthritis and Osteoporosis</li></ul></li></ul>	

- Diabetes
  - Hypertension and Coronary artery disease
  - Terminal Illnesses: Renal failure, Cancer
  - Psycho-neurological disorders: Depression, Anxiety, Dementia, Parkinson's disease, Alzheimer's Disease.
- Hormonal Changes: Menopause and Andropause
  - Aging research, Anti-Aging interventions, Anti-Aging Drugs and Surgical procedures.

**Suggested Readings:**

1. Bathla, (2001). *A handbook of Geriatric Medicine*.
2. Berkman, B. (2006) *Handbook of Social Work in Health and Aging*. New York: Oxford University Press.
3. Dey, A.B. (1998-1999) *Health in Old Age: A guide to good health for senior citizens and their careers*, New Delhi: All India Institute of Medical Sciences.
4. Dey, A.B. (2003) *Health Care of Older People: A Manual for Trainers of Nurses*, New Delhi: Ministry of Health and Family Welfare.
5. Dey, A.B (2003) *Handbook on Health Care of Elderly: A Manual For Physicians in Primary and Secondary Health Care Facilities*, New Delhi: Ministry of Health And Family Welfare.
6. Mezey, M.D. (2001) *The Encyclopaedia of Elder Care*, New York: Springer Publications.
7. Moody, H. (2000) *Aging: Concepts and Controversies*, California: Sage Publications
8. Murray, C.J. Salomon, J.A. Mathers, C.D. (2002) *.Summary measures of population health: concepts, ethics, measurement and applications*. Geneva: World Health Organization.
9. Sharma O.P. (2008) *Geriatric Care – A Textbook of Geriatrics and Gerontology*, New Delhi, Viva Publications.
10. Sharma, O.P. (2015) *Principles and Practice of Geriatric Medicine*, New Delhi: Viva Books Private Ltd.
11. Lindquist, L.A. (2018) *New Directions in Geriatric Medicine: Concepts, Trends, and Evidence-Based Practice*, Springer International Publishing Switzerland, 2016.

**Teaching Plan:**

**Week 1:** Concept of Healthy Ageing, Biological theories of ageing

**Week 2:** Distinction between Normal and Pathological Patterns of Ageing, Factors affecting Healthy Ageing

**Week 3:** Concept and Components of ‘Activities of Daily Living’ (ADL) and ‘Quality of Life’ (QOL); ‘Quality of Life Index’ (QOLI): Health-related Quality of Life (HRQoL), Quality Adjusted Life Years (QUALY) and Disability Adjusted Life Years (DALY). Geriatric assessment- need, components, tools and techniques of: anthropometric assessment, biochemical assessment, functional ability and physical health assessment and clinical assessment.

**Week 4:** Causes and Consequences of ageing, Cardiovascular and respiratory ageing

**Week 5:** Renal and Reproductive ageing, Gastrointestinal ageing

**Week 6:** Cerebro-vascular ageing, Sensory ageing

**Week 7:** Degenerative disorders: etiology, pathophysiology, clinical and biochemical manifestations, treatment and prevention : Disability- Hearing and Vision Impairment, Dental and speech impairment; Orthopaedic disorders- Arthritis and Osteoporosis

**Week 8:** Diabetes, Hypertension and Coronary artery disease

**Week 9:** Terminal Illnesses: Renal failure, Cancer; Psycho-neurological disorders: Depression, Anxiety, Dementia, Parkinson’s disease, Alzheimer’s Disease.

**Week 10:** Hormonal Changes: Menopause and Andropause

**Week 11:** Ageing research, anti-ageing interventions and Healthy Living: Lifestyle modification, Fitness and Activity, Physical Exercise, Yoga and Meditation

**Week 12:** Calorie restriction, Weight Reduction, anti-ageing Drugs and Surgical procedures

### Facilitating the achievement of Course Learning Outcomes

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
I	Gain insight about Concept of ageing	Reading of research on Concept of ageing	Presentation of various research papers on ageing
II	Learn the method of Assessment of ageing	PowerPoint presentations and Videos of methods of assessment	
III	Promote critical thinking and understanding the Process of Ageing	Group discussion on Process of Ageing	Short Assignment
IV	Appreciate the importance of Clinical aspects of ageing	Power point presentation of clinical presentations of ageing	Project on clinical manifestations of ageing

## **PRACTICAL**

**Duration: 3 hours**

**Maximum marks: 50**

**Teaching Periods: 4/week (1 practical)**

**Teaching Load: 12 Practical /semester**

### **Course Objectives:**

To develop conceptual clarity about the nature of anatomical and physiological changes an individual undergoes with advancing age and its implications on the functional ability, clinical profile and quality of life of an Aging individual. It promote critical thinking about aging research and anti-Aging interventions in laboratory animals and humans which may slow down the Aging process

### **Course Learning Outcomes:**

Student will be able to-

1. Use and interpret Geriatric assessment tools and techniques
2. Understand fundamental concepts and terminology of Aging and age related diseases.
3. Gain an insight about the implications, care and management of degenerative disorders:

## **CONTENTS**

## **PERIODS**

### **UNIT I: Geriatric assessment:**

**10**

- Use and interpretation of tools and techniques
- Functional ability and physical health assessment
- Clinical assessment
- Anthropometric assessment
- Biochemical assessment

### **UNIT II: Use and interpretation of Functional ability and physical health assessment 12**

- Activities of Daily Living' (ADL)

- Quality of Life' (QOL)
- Quality of Life Index (QOLI)
- Health-related Quality of Life (HRQoL)
- Quality Adjusted Life Years (QUALY)
- Disability Adjusted Life Years (DALY)

### **UNIT III: Interpretation of degenerative disorders: care and management**

**24**

- Disability : Hearing and Vision Impairment, Dental and Speech impairment
- Orthopaedic disorders: Arthritis and Osteoporosis
- Diabetes
- Hypertension and Coronary artery disease
- Terminal Illnesses : Renal failure and Cancers
- Psycho-neurological disorders: Depression, Anxiety, Dementia, Parkinson's disease and Alzheimer's disease.

#### **Suggested Readings:**

1. Bathla, (2001) *A handbook of Geriatric Medicine*.
2. Berkman, B. (2006) *Handbook of Social Work in Health and Aging*. New York: Oxford University Press.
3. Dey, A.B. (1998-1999) *Health in Old Age: A guide to good health for senior citizens and their careers*, New Delhi: All India Institute of Medical Sciences.
4. Dey, A.B (2003) *Health Care of Older People: A Manual for Trainers of Nurses*, New Delhi, Ministry of Health and Family Welfare.
5. Mezey, M.D. (2001) *The Encyclopaedia of Elder Care*, New York: Springer Publications.
6. Murray, C.J. Salomon, J.A. Mathers, C.D. (2002) *Summary measures of population health: concepts, ethics, measurement and applications*. Geneva: World Health Organization.
7. Lindquist, L.A. (2018) *New Directions in Geriatric Medicine: Concepts, Trends, and Evidence-Based Practice*, Springer International Publishing Switzerland, 2016.
8. [Chentli, F.](#) [Azzoug, S.](#) and [Mahgoun, S.](#) (2015) *Diabetes mellitus in elderly Indian J Endocrinol Metab.* Nov-Dec; 19(6): 744–752. doi: [10.4103/2230-8210.167553](https://doi.org/10.4103/2230-8210.167553)

**CORE 3: AGING AND THE BUILT ENVIRONMENT  
THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

**Course Objectives:**

This course will address the different aspects of the living environment of older adults. The students will learn about the impact of the physical environment (Natural & Built environment) on the aged, regional planning , urban planning , housing types and its effects on aged , effects of different relocations and institutionalization.

**Course Learning Outcomes:**

After doing this course the students will be able to -

Develop an understanding of the different aspects of the living environment (Natural & Built environment) of older adults

Learn about the impact of the physical environment on the aged

Gain an understanding about regional, urban planning and housing for elderly

Acquire skills to minimize environmental hazards and ensure a barrier free environment in the home for older adults

Gain knowledge about the requirements of adaptable housing, old age homes, day care centres and other facilities for older persons

**CONTENTS**

**PERIODS**

**UNIT 1: Physical Environment for Aged**

**20**

- Physical environment (Natural and Built) for the older adults. Understanding age-related changes, special requirements, different components (Landscape, building, lighting, fixtures, furniture etc), hazards.

- Adaptable housing – need and advantages in contemporary age.

## **UNIT II: Housing for Aged**

**10**

- Major areas of the dwelling units for older adults. Housing for older adults and the environment, Building types, Housing and neighborhood problems.
- Architectural features for assistance- Signs, Perceptual access, Architectural differentiation, planned configuration. Prevention of falls and accidents.

## **UNIT III: Coordination and Community Settings**

**8**

- Building Interventions – Accessibility, Communication, Coordination, Housing improvements
- Minimizing hazards. Planning safe housing and community settings for older persons
- Barrier free environment at homes, public places

## **UNIT IV: Transportation Planning and Institutionalization**

**10**

- Transportation planning for older adults - Road junctions , Lanes & Roundabouts
- Need for safe old age homes, community dwellings, day care centres for older adults
- Prevention of dependency and institutionalization
- Educating older persons on personal safety
- Relocations - types and advantages

### **Suggested Readings:**

1. Prakash, I. J. (2005). *Aging: Search for New Paradigms*. Bangalore University, Bangalore.
2. Wacker, R. R. and Roberto K. A. (2008). 3<sup>rd</sup> ed) *Community Resources for Older Adults – Programmes and Services in an era of Change*. Sage publications.

### **Teaching Plan:**

**Week 1:** Introduction to the Subject, Study of Natural and Built Environment components for older persons , Special requirements

**Week 2:** Urban Planning and Housing for Elderly , Housing types , Need of Adaptable Housing for elderly

**Week 3:** Architectural features for assistance (e.g. Signs , Perceptual access etc.), Prevention of

falls and accidents.

**Week 4:** Understanding skills for minimizing environmental hazards, Old age homes and Day care centres, Facilities for older adults

**Week 5:** Building Interventions – Accessibility, Communication, Coordination etc., Housing improvements

**Week 6:** Customized designs of fittings and fixtures for elderly, Linking special needs with housing for elderly. Assignment Preparation and Test

**Week 7:** Study of different climates in the country, Climatic effects on elderly, Macro and Micro climatic effects.

**Week 8:** Renovations of Residences for adopting adverse climatic change, Barrier free environment at homes and public places.

**Week 9:** Components of housing (e.g. Living Rooms, Washrooms, Kitchens and Stairs for elderly), special provisions for elderly

**Week 10:** Transportation planning for older adults, Road junctions etc. Need for safe walkways and lanes.

**Week 11:** Prevention of dependency and institutionalization, Educating older persons on personal safety.

**Week 12:** Different types of Relocations and their advantages, Assignment Preparation and Test, Revision

### **Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Understand the different aspects of the living environment of older adults	Discussion, PowerPoint presentations, Case studies	Class Quiz
2.	Understand different types of Housing for aged , adaptable housing and its advantages	Reading different case studies , Power Point presentations , Video presentations	Class assignment
3.	Appreciate importance of Coordination and	Power Point presentations,	Presentations by students on need of coordination

	Community Settings	Discussion of present age systems	
4.	Understand safe Transportation Planning and Institutionalization for aged	Power Point presentations, Discussions with Videos on BRT , FOB and Lane systems , Case study of V8 transportation system	Assignment on connectivity via Node points and Assignment on city survey for shortcomings in current transportation system for aged

### **PRACTICAL**

**Duration: 3 hours**

**Maximum marks: 50**

**Teaching Periods: 4/week (1 practical)**

**Teaching Load: 12 Practical /semester**

Residential Colony survey to understand different components (Landscape & building components)

1. Residential Colony survey to understand Urban & Regional planning (Land use & Zoning)
2. Preparation of suitable questionnaire to understand age related issues
3. Preparation of a case study explaining adaptable housing for aged
4. Residential Colony survey to understand use of adaptive technologies, ranging from walkers, hearing aids, etc. and to check Falls and Safety-proof of homes
5. Survey to check existing transportation issues with older adults

### **CORE 4: POLICIES, PROGRAMMES AND SERVICES FOR OLDER ADULTS**

#### **THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

**Course Objectives:**

This Course will expose the students to national and international policies and provisions related to the older adults. It will also familiarize the students to the various programmes and services for the elderly that are provided by the public, private as well as the NGO sector.

### **Course Learning Outcomes:**

Student will be able to:

Get familiar with the National and International policies designed for Older Adults.

Appraise the programmes and services set up for older adults.

Develop an understanding about the role of various agencies and individuals in elderly care.

## **CONTENTS**

## **PERIODS**

### **UNIT I. International policies and provisions for Older Adults**

**12**

- UN Principles for Older Persons (1991)
- Proclamation on Aging
- Madrid Declaration (2001)
- Universal Declaration of Human Rights (UDHR, 1948)
- Integrated Care for Older People (ICOPE Guidelines, WHO 2017)

### **UNIT II. Constitutional provisions and policies for Older Adults in India**

**8**

- Persons with Disabilities (equal opportunities, protection of rights and full participation) Act (1995)
- National Policy on Older Persons (1999)
- The Maintenance and Welfare of Parents and Senior Citizens Act (2007)

### **UNIT III. Programmes and Services for the Older Adults**

**16**

- Programmes/ Schemes for Welfare, Shelter and Housing, Health and Disability, Pension and Retirement, Legal Aid, etc.

- Services for old age care - long and short-term stay, day care, dementia care, respite care, home based services like meals on wheels, home caregiving etc.

#### **UNIT IV: Role of various agencies and individuals in elderly care**

**12**

- Ministry of Social Justice and Empowerment, Government of India
- Non Governmental Organisations, Community Based Organisations, Senior Citizens Associations, Religious and philanthropic institutions
- Family
- Volunteers - role, rights and responsibilities

#### **Suggested Readings:**

1. Chakraborti, R.D. (2004) *Greying of India: Population Aging in the context of Asia*, New Delhi: Sage Publications.
2. Desai, M., Siva Raju, S. (Eds). (2000) *Gerontological Social Work in India*, New Delhi: B.R. Publication.
3. Government of India (1999) *National Policy for Older Persons*.
4. HelpAge India (2016) *Senior Citizen's Guide*. Revised Edition.
5. Irudaya Rajan, S. (Ed) (2008) *Social security for the elderly: Experiences from South Asia*. New Delhi: Routledge Publication, New Delhi.
6. Irudaya Rajan, S., Balagopal, G. (Eds.) (2017) *Elderly care in India – Societal and State responses*, Springer Singapore.
7. Irudaya Rajan, S., Mishra U.S., Sharma, P.S. (1999) *India's Elderly: Burden or Challenge*, New Delhi: Sage Publications.
8. Mayer, P.P, Dickinson, E.J., Sandler, M. (Eds) (1997) *Quality Care for elderly people*, London: Chapman and Hall.
9. Modi, I. (Ed) (2001) *Aging and Human Development*, Jaipur: Rawat Publications.
10. Muttagi, P.K. (1997) *Aging Issues and Old Age Care-A Global perspective*, New Delhi: Classical Publishing Company.
11. Tattwamasi, P.S., Tyagi, R. (2015) *Caring for the elderly: Social gerontology in the Indian context*, Sage India.
12. UN (2004) *Policy Responses to Population Decline and Aging: Special issue*, New York.

13. Wacker, R.R., Roberto, K.A. (2014) *Community Resources for Older Adults – Programmes and Services in an era of Change*. 4th ed. Sage publications, Inc.

**Internet websites/ readings:**

- <http://socialjustice.nic.in/writereaddata/UploadFile/Annexure-X635996104030434742.pdf> (The Maintenance and Welfare of Parents and Senior Citizens Act, 2007).
- <http://www.ohchr.org/EN/ProfessionalInterest/Pages/OlderPersons.aspx> (United Nations Principles for Older Persons)
- <http://www.ohchr.org/EN/UDHR/Pages/UDHRIndex.aspx> (Universal Declaration of Human Rights).
- <http://www.who.int/Aging/publications/guidelines-icope/en/> (ICOPE guidelines)

**Teaching Plan:**

- Week 1**
  - Introduction to the Course
  - International policies and provisions for older persons in the United Nations - UN Principles for Older Persons (1991)
- Week 2**
  - UN Principles for Older Persons (1991)...continued
  - Proclamation on Aging and the Global Targets for Aging
- Week 3**
  - Vienna Declaration
  - Madrid Declaration (2001)
  - Universal Declaration of Human Rights (1948)
- Week 4**
  - Integrated Care for Older People (ICOPE Guidelines, WHO 2017)
- Week 5**
  - National Policy on Older Persons (1999)
- Week 6**
  - Persons with Disabilities (equal opportunities, protection of rights and full participation) Act (1995)
  - The Maintenance and Welfare of Parents and Senior Citizens Act (2007)
- Week 7**
  - Programmes/ Schemes for Welfare, Shelter and Housing, Health and Disability for elderly
- Week 8**
  - Programmes/ Schemes for Pension and Retirement, Legal Aid, etc. for elderly

- Week 9**
- Services for old age care - long and short-term stay, day care, dementia care, respite care, home based services like meals on wheels, home caregiving etc.
- Week 10**
- Services for old age care - home based services like meals on wheels, home caregiving etc.
- Week 11**
- Role of Ministry of Social Justice and Empowerment, Government of India in elderly care
  - Role of Non Governmental Organisations, Community Based Organisations, Senior Citizens Associations, Religious and philanthropic institutions in elderly care
- Week 12**
- Role of Family in elderly care
  - Volunteers - role, rights and responsibilities in elderly care

#### **Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
I and II	Get familiar with the National and International policies designed for Older Adults.	Lecture-cum-Discussion	Assignment on critical review of International and National Policies for elderly
III	Appraise the programmes and services set up for older adults.	Lecture-cum-Discussion (using videos/ short films on programmes and services), Talks by experts	Assignment/ Student Presentations on programmes and services for elderly
IV	Develop an understanding about the role of various agencies and individuals in elderly care.	Lecture-cum-Discussion (using videos/ short films on various agencies), Talks by experts	Assignment/ Student Presentations on role of various agencies/ individuals in elderly care

**ELECTIVE 1: MANAGEMENT AND REHABILITATION OF OLDER ADULTS  
WITH SPECIAL NEEDS**

**THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

**Course Objectives:**

This course will address specific sections amongst the elderly who require special understanding and attention. In our country the significant groups who comprise these amongst the elderly are women, rural and tribal elderly, socially and economically deprived groups, and victims of abuse and neglect. The special needs of older adults with medical problems like dementia, Alzheimer's disease, Parkinson's disease, terminally ill, bedridden elderly will also be dealt with. It will also focus on aspects related with management and rehabilitation.

**Course Learning Outcomes:**

The student will be able to -

Develop a perspective on the marginalization of groups such as women, rural and tribal elderly and others mentioned above

Acquire a conceptual understanding of abuse, neglect and exploitation of older persons

Acquire knowledge and skills to deal with older adults with special needs due to illness/disease

Acquire an understanding of aspects related with management and rehabilitation of the elderly

**CONTENTS**

**PERIODS**

**Unit I: Historical Perspective**

**8**

- Overview of Socio-economic development and its impact on various elderly groups
- Socio-economically diverse groups of Elderly: Urban; rural; tribal; destitute; etc.

**Unit II: Elder abuse**

**12**

- Conceptual understanding of Elder Abuse
- Types of Elder Abuse
- Characteristics of victims based on gender, marital status, health, chronological age, substance abuse, living arrangements, psychological factors, problem behavior, dependence isolation, etc.
- Social and mental health consequences of maltreatment
- Interventions at the preventive level and therapeutic level

**Unit III: Elderly women** **6**

- Demographic profile
- Physical and mental health for older women
- Economic security
- Widowhood and coping

**Unit IV: Mental health issues** **12**

- Understanding mental health and well being
- Understanding specific mental health issues: Depression; Anxiety; Loneliness; Alzheimer's, Parkinsons and age related dementias
- Managing and rehabilitation of elderly with mental health issues

**Unit V: Rehabilitation of Older adults with disabilities** **10**

- Physical health and constraints; coping mechanisms
- Rehabilitation
- Concepts and History of Rehabilitation
- Goals of Rehabilitation
- Principles of Rehabilitation – Assessment, Goals, Priorities and Monitoring Progress
- Rehabilitation in Old age – Special features in relation to aging, multiple pathology, Policies, Expectation, Carers,
- Social and Financial Rehabilitation
- Rehabilitation as Team work – Team leadership, Therapist, Physiotherapy, Occupational Therapy, Social Worker, Physician and Nursing personnel

- Organisation and Effectiveness of Rehabilitation services – Community Services, Geriatric Unit, Day hospital, Day Care Centre, Long Stay Care Institution – role of rehabilitation in the above services
- Empowering for retirement

### **Suggested Readings:**

- Tattwamasi, P. and Tyagi, R. (2015). *Caring for the Elderly: Social Gerontology in the Indian Context*. SAGE publications India.
- Chadha, N. K. (2012). *Issues and trends in rehabilitation research*.

### **Teaching Plan:**

**Week 1:** Historical Perspective

**Week 2:** Overview of Socio-economic development and its impact on various elderly groups, Socio-economically diverse groups of Elderly: Urban; rural; tribal; destitute; etc.

**Week 3:** Conceptual understanding of Elder Abuse, Types of Elder Abuse

**Week 4:** Characteristics of victims based on gender, marital status, health, chronological age, substance abuse, living arrangements, psychological factors, problem behavior, dependence isolation, etc.

**Week 5:** Social and mental health consequences of maltreatment, Interventions at the preventive level and therapeutic level

**Week 6:** Elderly women: Demographic profile, Physical and mental health for older women,

**Week 7:** Elderly Women: Economic security, Widowhood and coping

**Week 8:** Mental health issues: Understanding mental health and well being, Understanding specific mental health issues: Depression; Anxiety; Loneliness; Alzheimer's and dementias

**Week 9:** Managing and rehabilitation of elderly with mental health issues

**Week 10:** Older adults with developmental disabilities: Physical health and constraints,

**Week 11:** Physical constraints and coping mechanisms

**Week 12:** Rehabilitation, Empowering for retirement

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Develop a perspective on the marginalization of groups such as women, rural and tribal elderly and others mentioned above	Discussion, PowerPoint presentations, demonstrations related to marginalized groups with special needs	Class Quiz, Assignment
2.	Acquire a conceptual understanding of abuse, neglect and exploitation of older persons	Classroom discussions, Power Point presentations, demonstrations through case studies	Class quiz
3.	Acquire knowledge and skills to deal with older adults with special needs due to illness/disease	Classroom discussions, Power Point presentation, discussion on case studies	Presentations by students and class quiz
4.	Acquire an understanding of aspects related with management and rehabilitation of the elderly	Power Point presentations, Discussion, Informative videos showing rehabilitation strategies	Presentations by students and class quiz

**ELECTIVE III: COLLECTIVE ACTION, ADVOCACY, NETWORKING FOR OLDER PERSONS**

**THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

**Course Objective**

This Course will focus on the dynamics of working with Groups and Communities. It will sensitize students to the need for advocacy and networking and equip them with skills for community engagement.

### **Course Learning Outcomes**

The student will be able to -

Understand the concept of Advocacy

Understand Networking and Collective Action

Appreciate the significance of Collective Action such as Group and Community intervention and Advocacy and Networking in the context of Older Adults

Acquire the requisite skills for effective Collective Action, Advocacy and Networking.

### **CONTENTS**

### **PERIODS**

#### **Unit 1: What Is Advocacy?**

**12**

- Issues, Goals, and Objectives: Building the Foundation
- Target Audiences: Identifying Support and Opposition
- Messages: Informing, Persuading, and Moving to Action
- Data Collection: Bridging the Gap
- Fundraising: Mobilizing Resources
- Implementation: Developing an Action Plan
- Monitoring and Evaluation

#### **Unit II: What Are Advocacy Networks; Collective Action**

**18**

- Nature and Scope of Collective Action
- Types of Collective Action (Groups, intra- and inter-Community mobilization)
- Group dynamics and processes as indicators of group development.
- Effective Communication: Understanding One Another
- Cooperation Not Competition: Building a Team
- Decision Making: Reaching Group Consensus
- Mission Statements: Creating a Common Purpose

- Putting It All Together: Managing the Network

### **Unit III: Implementation: Developing an Action Plan**

**18**

- Skills for advocating the integration of Older Adults in society and creating spaces for active ageing to occur
- Developing and sustaining Self Help Groups with a special emphasis on Older Women
- Value System of an ageing individual; Cultural attitudes held by the elder as well as society at large;
- Networking with Organisations of Citizens' Groups and those working with Citizens' Associations.
- Recreation and Constructive Use of Leisure Time.

#### **Suggested Readings:**

1. Schutz, A. and Sandy, M. G. (2011). *Collective Action for Social Change: An Introduction to Community Organizing*. Palgrave MC Millan
2. Gutman, G. and Spencer, C. (2010). *Aging, Ageism and Abuse: Moving from awareness to action*. Elsevier Insights

#### **Teaching Plan:**

**Week 1:** What Is Advocacy? Issues, Goals, and Objectives: Building the Foundation, Target Audiences: Identifying Support and Opposition

**Week 2:** Messages: Informing, Persuading, and Moving to Action; Data Collection: Bridging the Gap; Fundraising: Mobilizing Resources

**Week 3:** Implementation: Developing an Action Plan, Monitoring and Evaluation

**Week 4:** Nature and Scope of Collective Action: Types of Collective Action (Groups, Intra- and Inter-Community mobilization); Group dynamics and processes as indicators of group development.

**Week 5:** Effective Communication: Understanding one another, Cooperation not Competition: Building a Team

**Week 6:** Decision Making: Reaching Group Consensus, Mission Statements: Creating a Common Purpose

**Week 7:** Putting It All Together: Managing the Network

**Week 8:** Skills for advocating the integration of Older Adults in society and creating spaces for active ageing to occur

**Week 9:** Developing and sustaining Self Help Groups with a special emphasis on Older Women

**Week 10:** Value System of an ageing individual; Cultural attitudes held by the elder as well as society at large

**Week 11:** Networking with Organisations of Citizens' Groups and those working with Citizens' Associations

**Week 12:** Recreation and Constructive Use of Leisure Time

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Understand the concept of Advocacy	Discussion, PowerPoint presentations	Class Quiz, Assignment
2.	Understand Networking and Collective Action	Classroom discussions, Power Point presentation, case studies	Assignment, Class quiz, case study presentations
3.	Appreciate the significance of Collective Action such as Group and Community intervention and Advocacy and Networking in the context of Older Adults	Classroom discussions, Power Point presentation, case studies	Presentations by students and class quiz
4.	Acquire the requisite skills for effective Collective Action, Advocacy and Networking	Power Point presentations, Discussion	Presentations by students and class quiz

**CORE 5: BASICS OF RESEARCH METHODS, STATISTICS AND  
SCIENTIFIC WRITING  
THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

**Course Objectives:**

This Course will expose the student to an understanding of research methods adopted in gerontological research and the basic statistical methods to be applied. It will also equip the students with competencies in scientific writing. The students will be exposed to the use of computer software in research.

**Course Outcomes:**

The Course will equip the students with:

Understanding and developing skills in planning research designs in gerontological research

Ability to apply statistical techniques to research data for analyzing and interpreting data meaningfully.

Develop competencies in scientific writing skills

**CONTENT****PERIODS****UNIT I: Quantitative and Qualitative Research in Gerontology****18**

- Overview, meaning and purpose
- Quantitative Research – types, design, tools and techniques for data collection
- Qualitative Research – types, tools and techniques for data collection, qualitative data analysis and interpretation.
- Rapid Assessment Procedures
- Participatory Action Research

**UNIT II: Scientific Writing Methods****10**

- Formulation of research problem- Reviewing the literature, selecting a research problem, formulation of research objectives, constructing hypothesis
- Research Reports- Various components and structure
- Referencing and citation styles
- Ethical issues in research

**UNIT III: Data analysis and Interpretation****20**

- Conceptual understanding of statistical measures, testing of hypothesis, Normal distribution
- Measurement of central tendency, measures of variation
- Frequency distribution, histogram, frequency polygons
- Descriptive statistical measures: Selection and application
- Inferential statistical measure: Selection and application
- Computer data analysis

**Suggested Reading:**

1. Best, J.W. and Kahn, J.V. (2007) *Research in Education, 10<sup>th</sup> Edition*. Pearson Publications.
2. Cook, T.D. and Reinhardt CS (1979) *Qualitative and Quantitative Methods in Evaluation Research*, Beverly Hills, CA, Sage Publications.
3. Cresswell, J. (2009) *Research Design Qualitative and Quantitative and Mixed Method Approaches, 3<sup>rd</sup> Edition*, Thousand Oaks, Sage Publications.
4. Flick, U. (2009) *An Introduction to Qualitative Research, 4<sup>th</sup> edition*. Thousand Oaks, CA, Sage Publications Ltd.
5. Garrett, H.E. (1971) *Statistics in Psychology and Education*, David Haley and Co.
6. Green, J. and Thorogood, N. (2009) *Qualitative methods for Health Research. 2<sup>nd</sup> edition*, Sage Publications Ltd.
7. Gupta, S.P. (2002) *Statistical methods*, New Delhi, Sultan Chand.
8. Johnson, R.A. and Tsui, K.W. (1998) *Statistical Reasoning and Methods, 1<sup>st</sup> Edition*, New York, John Wiley.
9. Kothari, C.R. (2004) *Research Methodology –Methods and Techniques, 2<sup>nd</sup> Edition*, New Delhi, New Age international Publishers.
10. McIntyre, A. (2007) *Participatory Action Research*, Sage publications.
11. King, B.M. and Minium, E.W. (2008) *Statistical Reasoning in Behavioral Sciences.5<sup>th</sup> Edition*, John Wiley and Sons Limited.
12. Silverman, D. and Marvasti, A. (2008) *Doing Qualitative Research – A Comprehensive Guide, 1<sup>st</sup> Edition*, Sage publications Limited.
13. Kumar, R. (2011) *Research Methodology: A Step-By-Step Guide for Beginners*, Sage Publications Ltd.

**Teaching Plan:**

**Week 1:** Overview, meaning and purpose of quantitative and qualitative research in Gerontology

**Week 2:** Quantitative Research – types, design, tools and techniques for data collection

**Week 3:** Qualitative Research – types, tools and techniques for data collection, qualitative data analysis and interpretation.

**Week 4:** Rapid Assessment Procedures and Participatory Action Research

**Week 5:** Formulation of research problem- Reviewing the literature, selecting a research problem, formulation of research objectives, constructing hypothesis

**Week 6:** Research Reports- Various components and structure

**Week 7:** Referencing and citation styles, Ethical issues in research

**Week 8:** Conceptual understanding of statistical measures, testing of hypothesis, Normal distribution

**Week 9:** Measurement of central tendency, measures of variation

**Week 10:** Frequency distribution, histogram, frequency polygons

**Week 11:** Descriptive statistical measures: Selection and application

**Week 12:** Inferential statistical measure: Selection and application, Computer data analysis

### **Facilitating the achievement of Course Learning Outcomes**

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Understanding of research designs adopted in gerontological research	Lecture-cum-Discussion, Sharing of research designs from research studies in literature	Quiz, Assignment
2.	Skills in planning research studies	Lecture, group discussions, sharing research studies from literature	Assignment
3.	Ability to apply statistical techniques to research data for analyzing and interpreting data meaningfully.	Lecture- cum-discussion	Quiz, assignments
4.	Competencies in scientific writing skills	Lecture- cum-discussion,	Assignments

5	Understanding of the role of statistics and computer applications in research	Lecture- cum- discussion, demonstration	Assignments

## **CORE 6: NUTRITION AND AGING**

### **THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

#### **Course objectives:**

This Course will expose the students to an understanding of the changing nutritional needs with aging, the needs and wants in the food practices of the elderly, frailty in the elderly, the various disorders in which diet has a key role in alleviation, nutritional assessment of the elderly, drug use and food interaction

#### **Course Learning Outcomes**

On completion of the course the students will be able to:

Acquire a conceptual understanding of the fundamentals of good nutrition for older adults

Have knowledge of nutritional management of disease conditions common among older adults

Understand the various tools and techniques of nutritional screening and assessment of elderly

Have enhanced skills to plan diets for elderly and suggest lifestyle modifications for healthy Aging

Be able to provide diet counseling for management of various disease conditions

#### **CONTENTS**

#### **PERIODS**

**UNIT I: Nutrition for the Elderly**

**7**

- Introduction to nutrition, food and nutrients – Carbohydrates, Proteins, Lipids, Vitamins, Minerals
- Nutritional requirements of adults and elderly – how dietary needs change with aging
- Dietary guidelines for adults and elderly.

**UNIT II: Nutritional Care process** **7**

- Nutritional Care Process: An Overview
- Nutritional Screening and Assessment of the elderly - tools and techniques
- Diet Counseling
- Therapeutic modifications of the normal diet and enteral feeding

**UNIT III: Promoting Healthy Aging** **6**

- Nutrition guidance and lifestyle modification for healthy Aging.
- Dealing with Frailty and Nutritional Deficiencies
- Diet, Nutrient & Drug Interactions. Diet supplements – use and abuse
- Role of functional foods in aging

**UNIT IV: Nutrition in Disease** **16**

- Gastrointestinal disorders –Flatulence, Constipation, GERD, Diarrhoea
- Weight Imbalances – Obesity & Underweight
- Diseases of Heart and Blood Vessels - Hypertension, Dyslipidemias,
- Diabetes Mellitus
- Renal Disorders: Nephritis, Chronic Kidney Disease

**UNIT V: Nutritional management of:** **12**

- Musculoskeletal and Rheumatic Disorders – Osteoporosis, Arthritis
- Neurological Disorders – Dementia, Parkinsons Disease, Alzheimers Disease
- Cancers
- Terminally Ill

**Suggested Readings**

1. Davis, J. and Sherer, K. (1994) *Applied Nutrition and Diet Therapy for Nurses*. 2<sup>nd</sup> Edition. W. B. Saunders Co.
2. Escott-Stump, S. (1998) *Nutrition and Diagnosis Related Care*. 4<sup>th</sup> Edition Willions and Wilkins.

3. Garrow, J.S., James, W.P.T. and Ralph, A. (2000) *Human Nutrition and Dietetic*. 10<sup>th</sup> Edition. Churchill Livingstone.
4. Mahan, L. K. and Escott Stump. S. (2004) *Krause's Food Nutrition and Diet Therapy* 11<sup>th</sup> Edition W.B. Saunders Ltd.
5. Shils, M.E., Shike, M., Ross, A.C., Cabalero B., Cousins R.J. (2006) *Modern Nutrition in Health and Disease*. 10<sup>th</sup> Edition. U.S.A: Lippincott, William and Wilkins.
6. Srivastava R.K., Tewari B.K., Aggarwal Y. (2008) *Current Nutrition Therapy Guidelines in Clinical Practice: A Handbook for physicians, dietitiana and nurses*. New Delhi: DGHS, GOI.
7. Williams, S.R. (1993) *Nutrition and Diet Therapy*. 7<sup>th</sup> Edition, Times Mirror Mosby College Publishing. New Edition.
8. Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2016) *Textbook of Nutrition and Dietetics*. Elite Publishers, New Delhi

## Teaching Plan

**Week 1:** Introduction to nutrition, food and nutrients – Carbohydrates, Proteins, Lipids, Vitamins, Minerals

**Week 2:** Nutritional requirements of adults and elderly – how dietary needs change with aging, Dietary guidelines for adults and elderly.

**Week 3:** Nutritional Care Process: An Overview, Nutritional Screening and Assessment of the elderly - tools and techniques

**Week 4:** Diet Counseling , Therapeutic modifications of the normal diet and enteral feeding

**Week 5:** Nutrition guidance and lifestyle modification for healthy Aging., Dealing with Frailty and Nutritional Deficiencies

**Week 6:** Diet, Nutrient & Drug Interactions. Diet supplements – use and abuse, Role of functional foods in aging

**Week 7:** Nutrition in Disease: Gastrointestinal disorders –Flatulence, Constipation, GERD, Diarrhoea

**Week 8:** Nutrition in Disease: Weight Imbalances – Obesity & Underweight, Diabetes Mellitus

**Week 9:** Nutrition in Disease: Diseases of Heart and Blood Vessels - Hypertension, Dyslipidemias

**Week 10:** Nutrition in Disease: Renal Disorders: Nephritis, Chronic Kidney Disease

**Week 11:** Nutritional management of : Musculoskeletal and Rheumatic Disorders – Osteoporosis, Arthritis, Neurological Disorders – Dementia, Parkinsons Disease, Alzheimers Disease

**Week 12:** Nutritional management of: Cancers, Terminally Ill

**Facilitating the achievement of Course Learning outcomes**

Unit No	Course Learning outcomes	Teaching and Learning Activity	Assessment Tasks
1.	Acquire a conceptual understanding of the fundamentals of good nutrition for older adults	Discussion, PowerPoint presentations	Assignment
2.	Have knowledge of nutritional management of disease conditions common among older adults	Discussion	Quiz, Assignment
3.	Understand the various tools and techniques of nutritional screening and assessment of elderly	Demonstration, Discussion, PowerPoint presentations, Videos	Presentations, Quiz
4.	Have enhanced skills to plan diets for elderly and suggest lifestyle modifications for healthy Aging	Discussion, Practical planning of diets, visits to institutions of the aged	Assignment
5.	Be able to provide diet counseling for management of various disease conditions	Discussion, case studies, field work	Presentations

**PRACTICAL**

**Duration: 3 hours**

**Maximum marks: 50**

**Teaching Periods: 4/week (1 practical)**

**Teaching Load: 12 Practical /semester**

**Course Objectives:**

This Course will expose the students to the various disorders in which diet has a key role, develop an insight into planning diets for elderly, be aware of the various nutritional supplements and functional foods available in the market, realize the importance of lifestyle modifications for healthy Aging

**Course Learning Outcomes:**

On completion of the course the students will be able to:

Have skills to plan diets for elderly for various disease conditions

Be able to impart diet counseling and prepare aids for management of various disorders

Plan and conduct nutrition guidance and lifestyle modification programmes for healthy

Aging

<b>CONTENTS</b>	<b>PERIODS</b>
1. Market survey for nutritional supplements/ functional foods	1
2. Planning and preparation of diets and dishes for the following:	6
• Soft diet	
• Diarrhoea and Constipation	
• Obesity and Underweight	
• Hypertension and Dyslipidemia	
• Type 2 Diabetes	
3. Diet counseling and preparation of aids.	2
4. Planning and conduct of nutrition guidance and lifestyle modification programmes	3

**Suggested Readings:**

1. Khanna, K., Gupta ,S., Seth, R., Passi, S.J., Mahna, R., Puri, S. (2016) *Textbook of Nutrition and Dietetics. Elite Publishers, New Delhi*
2. Mahan, L. K. and Escott Stump, S. (2004) *Krause's Food Nutrition and Diet Therapy* 11<sup>th</sup> Edition W.B. Saunders Ltd.
3. Shils, M.E., Shike, M., Ross, A.C., Cabalero, B., Cousins, R.J. (2006) *Modern Nutrition in Health and Disease*. 10<sup>th</sup> Edition. U.S.A: Lippincott, William and Wilkins.
4. Srivastava, R.K., Tewari, B.K., Aggarwal, Y. (2008) *Current Nutrition Therapy Guidelines in Clinical Practice: A Handbook for physicians, dietitians and nurses*. New Delhi: DGHS, GOI.
5. Longvah, T., Ananthan, R., Bhaskaracharya, K., Venkaiah, K. (2017) *Indian Food Composition Tables*. NIN, ICMR, MoHFW.

**CORE 7: ORGANIZATION AND MANAGEMENT OF INSTITUTIONS AND SERVICES FOR OLDER ADULTS**

## **THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

### **Course Objectives:**

This course will address specific issues related with setting up, organization and management of Institutions and Services for Older Adults. This would require special understanding and an attention to detail regarding the requirements that the older adult could have. In our country as there is a movement from the joint to the nuclear family it may require a focus on setting up and managing institutions for the elderly. In doing so, the special requirements of the elderly would need to be concentrated on. The course will also focus on aspects related with both understanding management putting management concepts into practice.

### **Course Learning Outcomes:**

The student will -

Develop an understanding of the needs and types of institutions and services for older adults.

Acquire a conceptual understanding of establishing these institutions and services

Acquire knowledge and skills related with management of institutions and services for older adults.

Acquire an understanding of aspects related with evaluation, maintenance and improvement of institutions and services for the older adult.

## **CONTENT**

## **PERIODS**

### **UNIT I: Institutions and Services for Older Adults**

- Need, Types, Role of State, voluntary and corporate sector

**4**

### **UNIT II: Establishment of Institutions for Older Adults**

**20**

- Introduction to Management Process
- Establishment of Institutions and Services for the elderly
  - Need assessment, setting goals and objectives, deciding strategies/ services, resource planning and organization, planning for implementation, monitoring and evaluation, stakeholder participation
  - Land and Building, Equipment, Staff, Registration, legal status, constitution, financial resources, Basic services (boarding and lodging, hygiene and sanitation, food and nutrition, medical facilities, entertainment and engagement facilities), safety and security, maintenance and daily upkeep

**UNIT III: Management of Institutions and Services for Older Adults**

**12**

- Financial Management
- Human Resource Management
  - Managing the managers
  - Managing the clients
- Facility/ Service and Equipment Management
  - Boarding and Lodging
  - Hygiene and Sanitation
  - Food and Nutrition
  - Medical Facilities
  - Entertainment and Engagement

**UNIT IV: Evaluation, Maintenance and Improvement of Institutions and Services for Older Adults**

**12**

- Evaluation
  - Appraisal of existing equipment and services
- Maintenance
  - Management of wear and tear and obsolescence from daily use
  - On the job training and refresher courses for staff
  - Team building activities
- Improvement
  - New skill development for staff
  - Upgrading and expansion

- Downgrading and replacement of services/equipment

### **Suggested Readings:**

1. Coley, S. M. and Scheinberg, C. A. (2016). *Proposal writing: Effective Grantsmanship for Funding*. 5<sup>th</sup> edition, Sage Publications.
2. Nayar, P. K. B. (2016). *Manual on Old Age Homes. Prepared for Department of Social Justice*, The Government of Kerala.
3. Kettner, P. M., Moroney, R. M. and Martin, L. L. (2016). *Designing and Managing Programs: An effectiveness-based approach*. 5<sup>th</sup> edition. Sage Publications.

### **Teaching Plan:**

**Week 1:** Institutions and Services for Older Adults – Need, Types, Role of State, voluntary and corporate sector

**Week 2:** Establishment of Institutions for Older Adults: Introduction to Management Process

**Week 3:** Establishment of Institutions and Services for the elderly: Need assessment, setting goals and objectives, deciding strategies/ services

**Week 4:** Resource planning and organization, planning for implementation, monitoring and evaluation, stakeholder participation

**Week 5:** Land and Building, Equipment, Staff, Registration, legal status, constitution, financial resources

**Week 6:** Basic services (boarding and lodging, hygiene and sanitation, food and nutrition, medical facilities, entertainment and engagement facilities), safety and security, maintenance and daily upkeep

**Week 7:** Management of Institutions and Services for Older Adults: **Financial Management**

**Week 8:** Human Resource Management: Managing the managers, Managing the clients

**Week 9:** Facility/ Service and Equipment Management: Boarding and Lodging, Hygiene and Sanitation, Food and Nutrition, Medical Facilities, Entertainment and Engagement

**Week 10:** Evaluation: Appraisal of existing equipment and services

**Week 11:** Maintenance: Management of wear and tear and obsolescence from daily use, on the job training and refresher courses for staff, Team building activities

**Week 12:** Improvement: New skill development for staff, Upgrading and expansion,

Downgrading and replacement of services/equipment

**Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Develop an understanding of the needs and types of institutions and services for older adults.	Discussion, PowerPoint presentations and case studies	Class Quiz, Assignment
2.	Acquire a conceptual understanding of establishing these institutions and services	Classroom discussions, Power Point presentations, demonstrations through case studies	Assignment, Class quiz, case study presentations
3.	Acquire knowledge and skills related with management of institutions and services for older adults.	Classroom discussions, Power Point presentation, discussion on case studies, visits to institutions	Presentations by students and class quiz, presentations on visits
4.	Acquire an understanding of aspects related with evaluation, maintenance and improvement of institutions and services for the older adult.	Power Point presentations, Discussion, visits to institutions	Presentations by students and class quiz, presentations on visits.

**PRACTICAL**

**Duration: 3 hours**

**Maximum marks: 50**

**Teaching Periods: 4/week (1 practical)**

**Teaching Load: 12 Practical /semester**

**CONTENTS**

**PERIODS**

1. Planning of services for elderly in different institutionalized settings

**9**

- Assessment of needs – review of secondary data and collection of primary data
- Preparation of a suitable action plan

- Implementation of the action plan
2. Development of suitable aids for publicity and resource generation for institutions and services for the elderly. 3

**ELECTIVE 2i: HEALTH PROMOTION AND AGING  
THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

**Course Objectives:**

The course aims to develop an understanding of the health issues of older adults. It promotes critical thinking to gain knowledge on best practices for interventions that target health behaviors, on the individual, group, and community level. It also helps to acquire skills for health promotion among the older persons

**Course Learning Outcomes:**

Student will be able to -

- Develop an understanding of the health issues of older adults.
- Understand the link between health behaviors and morbidity/ mortality.
- Gain knowledge about interventions that target health behaviors.

**CONTENTS**

**PERIODS**

**UNIT I: Concept of Health Promotion in old age**

**10**

- General principles of Health Education and Promotion.
- Causes of morbidity and mortality in old age
- Characteristic features of disease in old age.
- Health Promotion – A life course approach
- Gerontechnology

**UNIT II: Promotion of Physical Health in old age**

**14**

- Preventive Strategies: Vaccination, Non-pharmacological and pharmacological measures

- Prevention of Falls and Accidents
- Lifestyle modification and Therapeutic Interventions: Fitness and Activity, Physical Exercise, Physiotherapy, Yoga, Exercise, Meditation, Weight Reduction, Calorie restriction.
- Laughter club, Respite care
- Hormone replacement therapy
- Safer use of Medicines: Drug selection and Dosage, Drugs -Drug interaction, Drug-Disease interaction.
- Anti Aging medicines

### **UNIT III: Promotion of Mental Health in old age**

**8**

- Conflict resolution and intervention skills,
- Stress and stress management
- Self esteem, Building up self esteem and self image,
- Art-based therapy

### **UNIT IV: Rehabilitation in old age**

**16**

- Medical rehabilitation and disability
- Organisation of rehabilitation services.
- Prevention of Dependency and Institutionalisation
- Preparation for death and dying
- Dealing with bereavement
- Care of the Chronically ill
- Care of patients with terminal illness
- Palliative care and Hospice

#### **Suggested Readings:**

1. Bathla, (2001) *A handbook of Geriatric Medicine*.
2. Burnard, P. (1994) *Counseling Skills for Health Professionals*, London: Chapman and Hall.
3. Dey, A.B. (1998-1999) *Health in Old Age: A guide to good health for senior citizens and their careers*, New Delhi: All India Institute of Medical Sciences.

4. Dey, A.B. (2003) *Health Care of Older People: A Manual for Trainers of Nurses*, New Delhi: Ministry of Health and Family Welfare.
5. Dey, A.B. (2003) *Handbook on Health Care of Elderly: A Manual For Physicians in Primary and Secondary Health Care Facilities*, New Delhi: Ministry of Health And Family Welfare.
6. Gerald, G. (2001) *Theory and Practice of Counseling and Psychotherapy California*: Wadsworth.
7. Mezey, M.D. (2001) *The Encyclopaedia of Elder Care*, New York: Springer Publications.
8. Prakash, I.J. (2007) *Strategies for an Active Old Age*, Bangalore: Bangalore University.
9. Sharma, O.P. (2008) *Geriatric Care – A Textbook of Geriatrics and Gerontology*, New Delhi: Viva Publications.
10. WHO Regional Office for Western Pacific (2003) *Aging and Health - A Health Promotion Approach for Developing Countries*, ISBN 9290610662.
11. Frost, R., Belk, C., Jovicic, A., Ricciardi, F., Kharicha, K., Gardner, B., Iliffe S., Goodman, C., Manthorpe, J., Drennan, V. M. and Walters, K (2017) *Health promotion interventions for community-dwelling older people with mild or pre-frailty: a systematic review and meta-analysis*, BMC Geriatrics 17:157; DOI 10.1186/s12877-017-0547-8,

### **Teaching Plan:**

- Week 1:** General principles of Health Education and Promotion, Causes of morbidity and mortality in old age
- Week 2:** Characteristic features of disease in old age, Health Promotion – A life course approach
- Week 3:** Gerontechnology, Preventive Strategies: Vaccination, Non-pharmacological and pharmacological measures
- Week 4:** Prevention of Falls and Accidents, Therapeutic Interventions: Physiotherapy, Yoga, Exercise, Meditation
- Week 5:** Laughter club, Respite care, Hormone replacement therapy
- Week 6:** Safer use of Medicines: Drug selection and Dosage, Drugs -Drug interaction, Drug-Disease interaction, Anti ageing medicines
- Week 7:** Conflict resolution and intervention skills, Stress and stress management
- Week 8:** Self esteem, Building up self esteem and self image, Art-based therapy.
- Week 9:** Medical rehabilitation and disability, Organization of rehabilitation services.

**Week 10:** Prevention of Dependency and Institutionalization, Preparation for death and dying

**Week11:** Dealing with bereavement, Care of the Chronically ill

**Week 12:** Care of patients with terminal illness, Palliative care and Hospice

### **Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
I	Gain insight about Concept of Health Promotion in old age	Reading of research on Concept of Health Promotion in old age	Presentation of various research papers on Health Promotion in old age
II	Learn the methods of Promotion of Physical Health in old age	PowerPoint presentations and Videos of methods of Promotion of Physical Health in old age	Project on Promotion of Physical Health in old age
III	Promote critical thinking and understanding the Promotion of Mental Health in old age	Group discussion on Promotion of Mental Health in old age	Short Assignment on Promotion of Mental Health in old age
IV	Appreciate the importance of Rehabilitation in old age	Power point presentation on Rehabilitation in old age	Quiz on Rehabilitation in old age

### **PRACTICAL**

**Duration: 3 hours**

**Maximum marks: 50**

**Teaching Periods: 4/week (1 practical)**

**Teaching Load: 12 Practical /semester**

#### **Course Objectives:**

The course aims to develop a conceptual understanding of the health promotion issues of older adults. It helps to acquire skills and best practices for health promotion among the older persons

## Course Learning Outcomes:

Student will be able to -

- Develop a conceptual understanding of the health issues of older adults.
- Understand the link between health behaviors and morbidity/ mortality.
- Gain knowledge and acquire skills for health promotion among the older persons

## CONTENTS

## PERIODS

### **UNIT I: Concept of Health Promotion in old age** **12**

- Use and interpretation of tools and techniques of Health Promotion
- Maintenance of good health and its relation to successful living
- Importance, use and procedure and practice of personal hygiene
- Health promotion related goals

### **UNIT II: Promotion of Physical Health in old age** **12**

- Lifestyle modifications
- Immunization in elderly
- Safe and comfortable environment for elderly: Prevention of fall
- Identification and recommendations for health promotion

### **UNIT III: Promotion of Mental Health in old age** **12**

- Public health approach to mental health
- Questionnaires and psychiatric rating scales
- Stress management
- Complementary and alternative therapy
- Community mental health services

### **UNIT IV: Rehabilitation in old age** **12**

- Medical Rehabilitation approaches and systems
- Community Based Disability Prevention and Rehabilitation
- Palliative care / long-term care of terminally ill

- Recent advances in Rehabilitation

**Suggested Readings:**

1. Haber, D. (2010) *Health Promotion and Aging: Practical Applications for Health Professionals*, 5th Revised edition, Springer Publishing Company, ISBN: 978 08 26 105981, 082610598X
2. Bathla, 2001. *A handbook of Geriatric Medicine*.
3. Berkman, B. (2006) *Handbook of Social Work in Health and Aging*. New York: Oxford University Press.
4. Dey, A.B. (1998-1999) *Health in Old Age: A guide to good health for senior citizens and their careers*, New Delhi: All India Institute of Medical Sciences.
5. Dey, A.B. (2003) *Health Care of Older People: A Manual for Trainers of Nurses*, New Delhi: Ministry of Health and Family Welfare.
6. Mezey, M.D. (2001) *The Encyclopaedia of Elder Care*, New York: Springer Publications.
7. Murray, C.J., Salomon, J. A., Mathers, C. D. (2002) *Summary measures of population health: concepts, ethics, measurement and applications*. Geneva: World Health Organization.
8. [Lindquist](#) L.A. (2018) *New Directions in Geriatric Medicine: Concepts, Trends, and Evidence-Based Practice*, Springer International Publishing Switzerland,2016.

**ELECTIVE 2 II: COUNSELING AND FAMILY THERAPY FOR THE ELDERLY**

**THEORY**

**Duration: 3 hours**

**Maximum marks: 100**

**Teaching Period: 4/ week**

**Teaching Load: 48 periods/ semester**

**Course Objectives:**

Increased numbers of older people and a continued lengthening of the life span signal the need to expand counseling services to the older adult. Older adults are healthier and better educated than ever before, concerned about the quality of life as well as the length of it. This course will familiarize the student with the concept and the principles of counseling that are essential for counseling for the elderly.

**Course Learning Outcomes:**

The student will -

Develop an understanding of the concept and principles of Counseling.

Acquire an understanding of basic Counseling skills.

Acquire knowledge related with family therapy

Acquire an understanding of Counseling related with mental health issues.

<b>CONTENTS</b>	<b>PERIODS</b>
<b>Unit I: Concept of Counseling</b>	<b>10</b>
<ul style="list-style-type: none"><li>• Meaning, scope and Applications</li><li>• Individual Counseling</li><li>• Family Counseling</li></ul>	
<b>Unit II: Principles of Counseling</b>	<b>8</b>
<ul style="list-style-type: none"><li>• Steps in Counseling</li><li>• Models for counseling</li></ul>	
<b>Unit III: Basic Counseling Skills</b>	<b>10</b>
<ul style="list-style-type: none"><li>• Listening and responding techniques</li><li>• Counsellor skills and qualities</li><li>• Ethics in Counseling</li></ul>	
<b>Unit IV: Family Therapy</b>	<b>10</b>
<ul style="list-style-type: none"><li>• Concept, Meaning, scope and Applications</li><li>• Assessment in Family Therapy: Family Tree, Time Lines and Genograms</li><li>• Family Functions: Functions and characteristics of healthy families, dysfunctional families</li><li>• Family Therapy as a process</li></ul>	
<b>Unit V: Counseling of Mental Health issues</b>	<b>10</b>
<ul style="list-style-type: none"><li>• Depression</li><li>• Dementia</li><li>• Delirium</li></ul>	

**Suggested Readings:**

1. Gladding, S. T. (2017). *Counseling: A Comprehensive Profession*. 8<sup>th</sup> Edition. Pearson Education.
2. Sriram, S. (ed.) (2016). *Counseling in India: Reflections on the Process Textbook of Human*. Springer.
3. Bholra, P. and Raguram, A. (ed.) (2016). *Ethical Issues in Counseling and Psychotherapy Practice: Walking the Line*. Springer
4. Esposito, J. and Hattem, A. (2015). *Introduction to Family Counseling: A Case Study Approach*. SAGE Publications.

### **Teaching Plan:**

**Week 1:** Concept of Counseling- Meaning, scope and Applications

**Week 2:** Individual Counseling

**Week 3:** Family Counseling

**Week 4:** Principles of Counseling -Steps in Counseling

**Week 5:** Models for counseling

**Week 6:** Basic Counseling Skills -Listening and responding techniques

**Week 7:** Counsellor skills and qualities and ethics in Counseling

**Week 8:** Family Therapy - Concept, Meaning, scope and Applications; Assessment in Family Therapy: Family Tree, Time Lines and Genograms

**Week 9:** Family Functions: Functions and characteristics of healthy families, dysfunctional families; Family Therapy as a process

**Week 10:** Counseling of Mental Health issues -Depression

**Week 11:** Counseling of Mental Health issues - Dementia

**Week 12:** Counseling of Mental Health issues - Delirium

### **Facilitating the achievement of Course Learning Outcomes**

<b>Unit No.</b>	<b>Course Learning Outcomes</b>	<b>Teaching and Learning Activity</b>	<b>Assessment Tasks</b>
1.	Develop an understanding of the concept and principles of Counseling	Discussion, PowerPoint presentations, demonstrations related to	Class Quiz, Assignment

		principles of Counseling and techniques	
2.	Acquire an understanding of basic Counseling skills	Classroom discussions, Power Point presentations, demonstrations and practice sessions	Class quiz
3.	Acquire knowledge related with family therapy	Power Point presentation, discussion on case studies	Presentations by students and class quiz
4.	Acquire an understanding of Counseling related with mental health issues.	Power Point presentations, Discussion, Informative videos on specific mental health issues	Presentations by students on specific mental health issues and class quiz

### **PRACTICAL**

**Duration: 3 hours**

**Maximum marks: 50**

**Teaching Periods: 4/week (1 practical)**

**Teaching Load: 12 Practical /semester**

- I. Developing basic counseling skills
- II. Methods of Counseling, family therapy
- III. Assessment in Family Therapy: Family Tree, Time Lines and Genograms

### **PROJECT / FIELD PLACEMENT**

**Credits: 2**

**Hours: 24**

**Maximum Marks: 50**

The student will undertake project work in an area related to the course work of the Programme. This enables students to appreciate the importance of being responsible to the changing needs of Older Adults and the environment they live in. At the same time insights can be developed about the organizational components and functions necessary for effective managements and service delivery.

OR

Students will be assigned to one or more organizations working with Older Adults. These will range from residential/non-residential; home-based rehabilitation and community-based interventions to networks/associations of senior citizens. The student will be assigned to a faculty guide. The task will be facilitated through a relevant guideline developed for this purpose.

The student will be expected to submit a report at the end of the project or field placement. No examination, continuous evaluation will be done.