

UNIVERSITY OF RAJASTHAN,
JAIPUR

M.A./M.SC./M.COM

(Home Science)


2013-2014 (PREVIOUS)-I/II SEMESTER

2014-2015 (FINAL)- III/IV SEMESTER

Prepared by

22/16/9

Checked by


23/9.

M.Sc. Home Sc. 2013-2015
Home Science
Corrected
20/9/2011

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Syllabus

M.Sc. Home Science Foods and Human Nutrition

2. Eligibility:

A candidate who has secured more than 50% or CGPA of 3.0 in the UGC Seven Point scale [50% or CGPA 2.5 in the UGC Seven Point Scale for SC/ST/Non-creamy layer OBC] or equivalent in the Bachelor degree in Science or Engineering or Technology or Medicine or Pharmaceutical Science shall be eligible for admission to First Semester of a Master of Science course.

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3. Scheme of Examination:

- (1) Each theory paper EoSE shall carry 100 marks The EoSE will be of 3 hours duration. Part 'A' of theory paper shall contain 10 Short Answer Questions of 20 marks, based on knowledge, understanding and applications of the topics/texts covered in the syllabus. Each question will carry ^{two} ~~one~~ mark for correct answer.
- (2) Part "B" of paper will consist of Four questions with internal choice (except in cases where a different scheme is specifically specified in the syllabus) of 20 mark each. The limit of answer will be five pages.
- (3) Each Laboratory EoSE will be of four/six hour durations and involve laboratory experiments/exercises, and viva-voce examination with weightage in ratio of 75:25.

4. Course Structure:

The details of the courses with code, title and the credits assign are as given below.

Abbreviations Used

Course Category

- CC: Compulsory Core Course
- EC: Elective Core Course
- OE: Open Elective Course
- S: Supportive Course
- SC: Self Study Core Course
- EM: Seminar
- RJ: Project Work
- P: Research Publication
- SECC: Self Study Elective core course

Contact Hours

- Lecture
- Tutorial
- Practical or Other
- Self Study

Relative Weights

- IA: Internal Assessment (Attendance/Classroom Participation/Quiz/Home Assignment etc.)
- ST: Sessional Test
- SE: End of Semester Examination

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First Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	FHN 101	Nutritional Biochemistry – I	CCC	4	4	0	0	3	0
2.	FHN 102	Food Science & Quality Control	ECC	4	4	0	0	3	0
3.	FHN 103	Human Nutritional Requirements	CCC	4	4	0	0	3	0
4.	FHN 104	Statistics*	CCC	4	4	0	0	3	0
5	FHN 111	Nutritional Biochemistry-I	CCC	6	0	0	9	0	6
6	FHN 112	Food Science & Quality Control	ECC	6	0	0	9	0	6
7	FHN 113	Human Nutritional Requirements	CCC	6	0	0	9	0	6
8	FHN 121	Seminar (CD issues in Nut.)	SSECC (SEM)	2	2	0	0	2	0

* Statistics Paper will be common for all 3 subjects – FN, HD, DCE
CCC (24), ECC (10), SSECC (2)

Second Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	FHN 201	Research Methodology*	CCC	4	4	0	0	3	0
2.	FHN 202	Nutritional Biochemistry II	CCC	4	4	0	0	3	0
3.	FHN 203	Food Microbiology & Food Safety	ECC	4	4	0	0	3	0
4	FHN 204	Human Nutritional problems	CCC	4	4	0	0	3	0
5	FHN 211	Computer Applications	CCC	2	0	0	3	0	3
6	FHN 212	Nutritional Biochemistry – II	CCC	4	0	0	6	0	6
7	FHN 213	Food Microbiology & Food Safety	ECC	4	0	0	6	0	6
8	FHN 214	Human Nutritional Problems	CCC	4	0	0	6	0	6

9 FHN 221 Entrepreneurship in food production ECC (PRJ) 6 6 0 9 0 3

9.	FHN 221	Entrepreneurship in Food Products	ECC (PRJ)	6	0	0	9	0	3
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* Research Methodology and Computer applications Papers will be common for all 3 subjects – FN, HD, DCE
CCC (22), ECC (14)

Third Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	FHN 301	Advanced Human Nutrition	ECC	4	4	0	0	3	0
2.	FHN 302	Public Health Nutrition - I	CCC	4	4	0	0	3	0
3.	FHN 303	Institutional Food Administration - I	CCC	4	4	0	0	3	0
4	FHN 311	Advanced Human Nutrition	ECC	4	0	0	6	0	6
5	FHN 312	Public Health Nutrition - I	CCC	4	0	0	6	0	6
6	FHN 313	Institutional Food Administration - I	CCC	4	0	0	6	0	6
7	FHN 321	Dissertation	CCC (DIS)	6	0	0	9	0	6
8	FHN 322	Seminar (CD issues in Food and Nutrition)	SSECC (SEM)	2	0	0	0	3	0
9.	FHN 323	Scientific writing	CCC	4	2	0	3	0	3

CCC (26), ECC (10)

Fourth Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	FHN 401	Clinical Nutrition and Dietetics	ECC	4	4	0	0	3	0
2.	FHN 402	Public Health Nutrition - II	CCC	4	4	0	0	3	0

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3.	FHN 403	Institutional Food Administration - II	CCC	4	4	0	0	3	0
4	FHN 411	Clinical Nutrition and Dietetics	ECC	4	0	0	6	0	6
5	FHN 412	Public Health Nutrition - II	CCC	4	0	0	6	0	6
6	FHN 413	Institutional Food Administration - II	CCC	4	0	0	6	0	6
7	FHN 421	Dissertation	CCC (DIS)	6	0	0	9	0	6
8	FHN 422	Seminar	SSECC (SEM)	2	0	0	0	0	3
9	FHN 423	Scientific writing	CCC	4	2	0	3	0	3

CCC (26), ECC (10)

FHN 101 - NUTRITIONAL BIOCHEMISTRY - I

Objectives:

- To augment the biochemistry knowledge acquired at the undergraduate level.
 - To understand the basic nature of bio molecules
 - To understand the mechanisms adopted by the human body for regulation of metabolic pathways.
 - To get an insight into interrelationships between various metabolic pathways
 - To become proficient for specialization in nutrition
 - To link metabolic events occurring at the cellular level.
- 1 **Cell:** Structure and functions of cell organelles - plasma membrane, nucleus, endoplasmic reticulum, golgi apparatus, mitochondria.
 - 2 **Carbohydrates:** classification, isomers, ring structure, proof of ring structure, reaction due to OH group, sugar derivatives of biological importance, polysaccharides (homoglucans and heteroglucans), detailed structure of starch, colour reaction.
 - 3 **Lipids:** classification, fatty acids, steroids, fat, phospholipids - their structures, chemical properties and characterisation, rancidity.
 - 4 **Proteins:** importance, classification of amino acids and their reactions, structure of proteins, properties, proof of peptide bond, methods of separation and determination of amino acids and peptides, estimation of amino acid sequence.
 - 5 **Hormones:** mode of action and biochemical role of
 - Interstitial Cell Stimulation Hormones
 - Adreno Cortico Tropic Hormone
 - Follicle Stimulating Hormone
 - Growth Hormone
 - Thyroid Stimulating Hormone
 - Steroidal Hormone

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6. **Blood Chemistry** – composition, haemoglobin, erythropoiesis, plasma proteins, coagulation of blood.

References

Books List of Paper I and Paper II (Nutrition Biochemistry)

- Harper, H. – A Review of Physiological Chemistry Lange Medical Library.
- White, A Handler, P and Smith, E.L. Principles of Biochemistry McGraw Hill book Co., New York.
- Kahn Conn E.E. and Stumpf, P.K. : Outlines of Biochemistry, Wiley Eastern Pvt. Ltd., New Delhi.
- Fruton J. and Symond S : General Bio Chemistry, Asia Publishing House, Bombay.
- Harrow, B. and Mazoor A. : A text book of Bio-chemistry W.B. Saunders book Co., Philadelphia.
- Medevit, M.E. and S.S., Mudambi : Human Nutrition Principles and Applications in India, Prentice Hall Inc.
- Clark, J.M. : Experimental Biochemistry.
- Osar Hawks : Practical Physiological Chemistry
- Robinson . Normal and Therapeutic Nutrition.
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- Pike R.L. and Brown M.L. Nutrition an Integrated approach, 3rd, John Willey and Sons, N.Y.
- Devlin TM (2002), Text Book of Biochemistry with Clinical Correlation, 5th ed. John Wiley & Sons.
- Murray RK, Granner DK, Meyer, PA & Rodwell VW (2003) Harper's Illustrated Biochemistry 26th ed. McGraw Hill Asia.
- Nelson DM & Core MM (2005) Principles of Biochemistry 4th ed. Freeman and Co.

FHN 102 - FOOD SCIENCE & QUALITY CONTROL

1. Introduction to food science.
 - Physical, chemical and functional properties of protein, carbohydrates, lipids, water, pigments and flavours.
2. **Physical Properties of Food**
 - Hydrogen – ion concentration, oxidation – reduction potentials, surface tension, adsorption, viscosity, plasticity, isoelectric points or proteins, colloidal chemistry of foods - sols, gels, foams and emulsions.
3. Chemical, physical nutritional alteration occurring in food products during food processes: freezing, thermal processing, dehydration, irradiation and environmental control.
4. Important food quality attributes
 - c. Sensory quality - colour, texture, flavour and taste Rheology
 - o Microbiological quality nutritional quality evaluation for food products.

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- Food Adulteration
- Self life studies
- Quality control and management
- 5 New Product Development
 - Market Research
 - Consumer dynamics
 - Process of development and standardization
 - Labelling
 - Marketing
 - Quality Evaluation
 - Entrepreneurship

References

- Norman P.N. Food Science the AVI Publishing Co. 1962.
- Charley H. Food Science John Wiley & Sons, 1982.
- Crisunld R.M. experimental study of foods thought on Nigglin Co. 1962
- Lowe, B. Experimental Cookery John intey & sons Inc 65
- Meyers LH Food Chemistry Van voctranol Reinheld Co., 1969.
- Kraneei A & Twig Fundamentals of quality control for the food industry.
- Bureau of Indian Standards: Specialization and Standard Methods Vol. I-XI.
- Fulle GW New Food Product Development from Concept to Market Place, CRC Press, NY, 1999.
- Mahendra SN, Food Safety – A Teacher Legal Analysis Total Mc Grew Hill.
- Winbond Winton. Techniques of Food Analysis Allied Scientific Publishers, 1999.
- GOI – Prevention of Food Adulteration Act.
- Usha Chandrashekhar: Food Science and Applications in Indian Cookery, Phoenic Publishing House, 2002.
- **Journals**
 - Journal of Food Science
 - Journal of Food Science and Technology
 - Indian Food Packer

FHN 103 - HUMAN NUTRITIONAL REQUIREMENTS

Objectives:

1. To enable students to understand cellular basis of growth and composition of human body
2. To understand the basis of human nutritional requirements and recommendations through life cycle.

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3. To understand the methods of evaluating protein quality and improving the same.

Contents

Theory

1. Body composition and cellular basis of growth
 - Significance and methods used for measurement of body composition in nutrition.
 - Application of body composition in nutrition
 - Cellular Growth and development during life cycle.
2. Nutritional requirements and recommended allowances for macro and micro nutrients for the entire life span (infancy to old age).
3. Methods of estimating requirements and allowances and a critical review of the following:
 - Energy
 - Proteins and amino acids
 - Lipids
 - Vitamins
 - Minerals and trace elements
 - Water
4. Latest research related to requirements of nutrients
5. Critical evaluation of International recommended dietary allowances - American, Canadian, FAO/WHO/UNU.
6. Dietary guidelines for Indians
7. Evaluation of protein quality
 - Analytical methods for the determination of nitrogen and amino acids in foods.
 - Evaluation of protein quality of foods from their amino acids content
 - Biological methods
 - Clinical methods
 - Biochemical methods
 - Relationship of stress and physiological state to the biological evaluation of protein quality.

References

- Evaluation of protein quality. Publication 1100, National Academy of Sciences, National Research Council, Washington, DC.
- Nutritional evaluation of protein foods. PL Pellet and VR Young, The United Nations University.
- A laboratory of manual techniques. Raghuramulu N, Madhvan Nair K, Kalyansundaram, S. NIN, ICMR, 2003.
- Essentials of foods and nutrition. M Swaminathan
- Modern nutrition in health and disease. Goodhart and ME Shills
- Nutrition an integrated approach. RL Pike and ML Brown, John Wily and sons.
- Energy and protein requirements. Report of Joint FAO/WHO/UNU Experts Consultation, Technical Report Series of No. 724, WHO, Geneva, 1985.
- Nutrient requirements and recommended dietary allowances for Indians, ICMR, 2010.
- Human energy requirements. Report of Joint FAO/WHO/UNU Expert Consultation, FAO Technical Report Series No. 1, WHO, Geneva, 2004.

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- Protein and amino acid requirements in human nutrition. Report of Joint FAO/WHO/UNU Expert Consultation, Technical Report Series No. 935, WHO, Geneva, 2007.
- Word Review of Nutrition and Dietetics, Vol. 32, Kargel, Basel, 1978.
- Vitamin and minerals requirements in human nutrition, Report of Joint FAO/WHO Expert Consultation on Human vitamin and mineral requirements. WHO, Geneva, 2004.
- Indicators for assessing vitamin A deficiency and their application in monitoring and evaluating intervention programmes. Micronutrient series. WHO/NUT/96.10. WHO, Geneva, 1996.

FHN 101 - STATISTICS

- Meaning and Scope of Statistics.
- Classification and Tabulation
- Graphic and Diagrammatic representation of data (frequency, histogram, graphs, bar-Diagram and pie-charts).
- Measure of Central tendency and Dispersion (Mean, Median, Mode, Quartiles, Range and Standard Deviation).
- Correlation and Regression: Correlation and its interpretation. Product Moment and Rank order Correlation Coefficient Regression Equations (without derivation) and its interpretations, use for prediction.
- Elementary ideas on probability (Simple Probability) Skewness and Kurtosis definition). Elementary ideas of random variable and its density function (Binomial, poisson, Uniform Normal varieties, Normal Distribution and its properties, Use of Normal Probability Tables).
- Elements of Testing a Statistical Hypothesis – Formulation of the problem, Definition of type I and II errors. Level of Significance, t-test, Z-test.
- Design of Experiments: Analysis of Variance.
- Non-Parametric Inference: Sign, Mann-Whitney and χ^2 test (as goodness of fit and independence of attributes in 2×2 and $r \times c$ contingency tables).
- Use of computer of statistical analysis using, SPSS.

References

- Simpson & Kafka : Basic statistics (Oxford & I.B.H. Publishers)
- Taro Yamane : Sampling Theory.
- Goon, Gupta, Das: Fundamentals of Statistics Vol. I and II Gupta.
- Snedecor & Cochran : Statistical Methods (Oxford and I.B.H. Publishers).
- Shukla M.C. & Gulshan S.S. : Statistics, Theory and Practise (Sultan Chand & Co.)
- Gupta S.P. : Statistical Methods (Soltan Chand & Co.).
- Good C.V. and Carter D.E. : Methods of Research – Educational Psychological, Sociological Application (Century Craft, New York – 1954)
- Kerlinger FA. : Foundations of Behavioural Research (Century Craft, New York, 1966).

- Yound P.V. & Schind C.G.: Scientific Social Survey and Research (Prentice Hall, New Delhi - 1968).
- Philips B.S. : Social Research, Strategy and Tactics.
- Mussen Paul: Hand Book of research Methods in Child Development
- Devdas R.P. & : Hand Book of Research Methodology Kulandaivel (Sri Ram Krishna Mission Vidyalaya 1971).

FHN 111 - NUTRITIONAL BIOCHEMISTRY-I- PRACTICAL

Objectives

- To demonstrate the need for careful planning and organization of laboratory work and skilful execution of practical/experiments.
 - To develop an understanding of the principles of various biochemical techniques
 - To develop competence in biochemical estimations.
 - To apply the knowledge acquired from the biochemical estimation to human nutrition.
1. Principles in biochemistry – Introduction to working principles of :
 - Spectrophotometry
 - Chromatography
 - Electrophoresis
 - Acid base buffers
 2. Titrimetric estimations
 - a. Determination of strength of acids and bases.
 - b. Estimation of vitamin C in lemon juice or any other fresh food stuff.
 3. Preparation of buffers and measurements of their pH with indicators and pH meter.
 4. Estimation of Protein by Kjeldahl's Method
 5. Colorimetric estimations
 - Glucose
 - Cholesterol

FHN 112 - FOOD SCIENCE & QUALITY CONTROL- PRACTICAL

- To conduct physical, chemical and nutritional analysis of commonly consumed raw and processed foods with or without additives
- Systematic development of a new product and its standardization within the BIS stipulated food standards and regulations, and to evaluate quality parameters for acceptability, labeling and cost of the finished products.
- To familiarise to be entrepreneur- a case study and visit to small scale food product unit and learn about plant location, investment and financing the project.

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- To familiarize with various tests and standards for quality assurance like food safety and implementation of HACCP/GMP at food service/industrial unit.
- Market Survey of Convenience and Ready – to-eat foods.
- Tests for adulteration in food products.
- Preparation of list of common edible permissible and non permissible food colours and preservative available and used by manufacturers.

FHN 113- HUMAN NUTRITIONAL REQUIREMENTS- PRACTICAL

Body composition analysis

- Techniques used in Body Composition Analysis- Demonstration and Application in field
 - Bioelectric Impedance Analysis
 - DEXA
 - Computed Tomography
 - Bone Density Analysis
- Use of body composition for determining extent of under nutrition and over nutrition in community
 - Visit to a community
 - Demonstration of Body Composition Analysis
 - Classification of subjects according to BCA
- To determine the growth status of children (0-12 years) in different socio-economic groups and comparison between groups and with Standards.

Energy requirements

- Calculation of BMR using different methods.
- Calculation of energy requirement by indirect calorimetry
- Energy balance study for one week.
- Calculation of energy requirement for reference man and woman, and adults of different body weights and age categories.

Protein requirements

- Calculation of protein allowances for children, adult man and woman, pregnant and lactating woman.

Evaluation of protein quality

- Calculation of chemical score of different foods and food products.
- Calculation of NDpCal% of different food products.
- Research design for evaluation of protein quality by biological and clinical methods.

Lipids

- Determination of the types of fat and fat composition of the diets through 24 hour recall and compare it with suggested values for SFA, PUFA, MUFA and Essential fatty acids

Minerals

- Estimation of calcium requirement through factorial approach
- Research design for calcium and iron balance

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Vitamins

- Estimation of Vitamin C using load test

FHN 121 - SEMINAR

(Contemporary Development issues in Foods and Human Nutrition)

The candidate will work on the selected topic, prepare a report and make a presentation.

FHN 201 - RESEARCH METHODOLOGY

- Research- Purpose and objectives
- Research Design, Purpose of Research Design, Types of Research Design – Experimental and Descriptive
- Definition and Identification of a Research Problem, Selection of problem, hypothesis, basis assumption and limitations of the problem.
- Techniques of sampling – Census & Sampling methods, probability and non-probability sampling procedures, sample size.
- Data gathering instruments Measurements and scales, Reliability and validity of measuring instruments – Questionnaire, Schedule, Score Card, Checklist.
- Methods of collecting data: Questionnaire, interview technique, observations, case study, focus group discussion, In depth interview.
- Planning, Executing and Analysis of Large scale surveys with special emphasis on surveys in Home Science.
- Presentation and preparation of report for dissertation publication.
- Review of literature: Importance, sources and writing review of literature.
- Bibliography: Importance of method of writing references of books, Journals, proceedings and websites.

Reference:

- i. Simpson & Kafka : Basic statistics (Oxford & I.B.H. Publishers)
- ii. Taro Yammne : Sampling Theory
- iii. Goon, Gupta, Das : Fundamentals of Statistics Vol. I and II. Gupta
- iv. Snedecor & Cochran : Statistical Methods (Oxford and I.B.H. Publishers)
- v. Shukla M.C. & Gulshan S.S. : Statistics, Theory and Practise (Sultan Chand & Co.)
- vi. Gupta S.P. : Statistical Methods (Soltan Chand & Co.).
- vii. Good C.V. and Carter D.E. : Methods of Research – Educational Psychological Application (Century Craft, New York 1954).
- viii. Kerlinger F.A. : Foundations of Behavioral Research (Century Craft, New York, 1966).

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- ix. Yound P.v. & Schind C.G. : Scientific Social Survey and Research (Prentice Hall, New Delhi - 1968).
- x. Philips B.S. : Social Research, Strategy and Tactics
- xi. Mussen Paul : Hand Book of Research Methods in Child Development.
- xii. Devdas R.P. & : Hand Book of Research Methodology Kulandaivel (Sri Ram Krishna Mission Vidyalaya 1971).

FHN 202 - NUTRITIONAL BIOCHEMISTRY -II

- 1 **Nucleic acids:** Structures, importance and role of bases, nucleotides nucleosides, DNA and RNA.
- 2 **Enzymes:** methods of isolation, purification and characterization, mechanism of enzyme action, kinetics of enzyme – effects of time, temperature, pH on velocity, Km – it's derivation and significance, elements of thermodynamics, - enthalpy, entropy and free energy, active site and specificity of enzymes, coenzymes.
- 3. **Vitamins – biochemical role**
- 4. **Minerals – Biochemical role**
- 5. **Digestive system:** Secretory and digestive functions of the salivary glands, stomach, pancreas, liver and the intestines. mechanisms of absorption of carbohydrates, proteins and fats.
- 6. **Intermediary metabolism and it's regulation**
 - o Carbohydrates – Glycolysis, TCA cycle, respiratory chain, high energy link, biological redox potential, Gluconeogenesis, hexose monophosphate shunt.
 - o Lipids - α , β and ω oxidation of fatty acids, β oxidation of odd and even number fatty acids, synthesis of fatty acids, phosphatidic acid, ketosis, synthesis of cholesterol.
 - o Nucleotides and Nucleic Acids – separation and determination of nucleotides and nucleic acids.

Proteins- absorption and conversion of amino acids, nitrogen fixation, degradation of ammonia and removal of amino acids through deamination, transamination, decarboxylation and urea cycle

References

- Harper, H. – A Review of Physiological Chemistry Lange Medical Library.
- White, A Handler, P and Smith, E.L. Principles of Biochemistry McGraw Hill book Co., New York.
- Kahn Conn E.E. and Stumpf, P.K. : Outlines of Biochemistry, Wiley Eastern Pvt. Ltd., New Delhi.
- Fruton J. and Symond S : General Bio Chemistry, Asia Publishing House, Bombay.
- Harrow, B. and Mazoor A. : A text book of Bio-chemistry W.B. Saunders book Co., Philadelphia.
- Medevit, M.E. and S.S., Mudambi : Human Nutrition Principles and Applications in India, Prentice Hail Inc.
- Clark, J.M. : Experimental Biochemistry.
- Osar Hawks : Practical Physiological Chemistry

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- Robinson : Normal and Therapeutic Nutrition.
- Lahniger, A.R. Biochemistry (2nd Ed.) Kalyani Pub.
- Pike R.L. and Brown M.L. Nutrition an Integrated approach, 3rd, John Willey and Sons, N.Y.
- Devlin TM (2002), Text Book of Biochemistry with Clinical Correlation, 5th ed. John Wiley & Sons.
- Murray RK, Granner DK, Meyer, PA & Rodwell VW (2003) Harper's Illustrated Biochemistry 26th ed. McGraw Hill Asia.
- Nelson DM & Core MM (2005) Principles of Biochemistry 4th ed. Freeman and Co.

FHN 203 - FOOD MICROBIOLOGY AND FOOD SAFETY

Objectives

1. To understand role of micro-organism in food, food spoilage
2. To understand advanced techniques of food preservation.
3. To learn about food-borne infections and intoxication.
4. To understand the criteria for microbiological safety in various food operations to avoid public health hazards due to food contamination.
5. To be able to understand the food legislation Acts and standards operating in India.

Unit 1

- Introduction to food microbiology
- Micro-organisms of importance in food-bacteria, Fungi and Yeast. Classification, morphology and physiology.
- Factors affecting growth of micro-organisms-pH, moisture, oxidation reduction potential, nutrients, temperature.

Unit 2

- Role of micro-organisms in spoilage of foods. Source of contamination, factors responsible and chemical changes due to spoilage.
 - Cereals & it's products(breads, grains, flours, pasta & bakery products)
 - Sugar & it's products(sugar, syrups, honey, candies)
 - Vegetables & fruits
 - Meat, fish & poultry
 - Milk & it's products
 - Canned foods

Unit 3

- Principles involved in preservation
 - Physical methods-drying, freezing, thermal treatment, irradiation, food additives
 - Chemical methods and naturally occurring anti microbial compound.

Unit 4

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- Importance of microbes in biotechnology.
- Probiotics. Single cell proteins.
- Microbes useful as food. Fermented foods wine, beer, vinegar, cheese,
- Indian fermented foods idli, dosa, vada, bhatura, dahi bada,

Unit 5

- Food Safety in food service establishments and other food areas.
- Street foods – food safety measures
- Food safety on wheels, wings and waves (railways, airlines & ships)

Unit 6

- Food safety assurance systems –HACCP, GMP
- Safety management at household level
- Public health hazards due to microbial contamination of foods.
- Food borne illness and intoxications-bacterial-Botulism, salmonellosis, staphylococcal infections

References

- Food microbiology – Frazier WC, Westhoff DC(1999) Fourth Edition Mc Graw Hill
- Text book of Microbiology – R. Ananthanarayan and C.K. Jayaram Paniker.

FHN 204 - HUMAN NUTRITIONAL PROBLEMS

1. Prevalence, etiology, biochemical and clinical manifestations, diagnostic techniques, preventive and therapeutic measures for the following nutritional problems :
 - a. Major Nutritional Problems:-
 - Protein Energy malnutrition
 - Vitamin A deficiency
 - Anaemia
 - Iodine Deficiency Disorders
 - Minor nutritional problems
 - Fluorosis
 - Rickets, osteomalacia & osteoporosis
 - Beriberi
 - Pellagra
 - Scurvy
 - Zinc Deficiency
2. Assessment of Nutritional Status, Various techniques for assessment of nutritional status:

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- Anthropometric measurements: Definition, measurements, tools/instruments. Technique for measurements, standards for references, indices, classification, interpretation of data. Use of anthropometry for onetime assessment, growth monitoring and emergency situation.
 - Biochemical estimations for diagnosis of protein energy malnutrition, vitamin A deficiency, anaemia, iodine deficiency disorders, fluorosis: Parameters, techniques for estimation, reference value,
 - Clinical examination
 - Dietary survey
 - Vital statistics
- 3 Introduction to causative factors, biochemical and clinical manifestation, treatment and therapeutic measures of following Inborn errors of metabolism:
- Disorders of amino acid metabolism i.e. Phenylketonuria, hypertyrosinaemia, hypervalalaemia, hyperhistidinaemia, hyper lysinaemia, homocystinuria.
 - Carbohydrate metabolism i.e. Pentosuria, galactosaemia,
 - Lipid metabolism i.e. Hyper chylomicronaemia, pure hypercholesterolaemia, mixed hyperlipidaemia, responding to vitamin therapy.
4. Food Safety and contamination
- Naturally occurring toxins and antinutritional factors : Lathyrism, Epidemic dropsy.
 - Importance of organic foods

References

- Bami MS, Rao PN and Reddy V (1996) Textbook of Human Nutrition, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
- Robinson CH and Lawler MR (1986) Normal and Therapeutic Nutrition, Macmillon, New York.
- Waterlow JC (1992) Protein Energy Malnutrition, Edward Arnold, A division of Hodder & Stoughton.
- Sachdeva HPS and Chaudhary P (Eds) (1994) Nutrition in Children: Developing country concerns, Department of Paediatrics, Maulana Azad Medical College, New Delhi.
- Mc Laren DS (1992) A colored Atlas and Textbook of Diet-Related Disorders.
- Passmore R and Eastwood MR (1986) Human Nutrition and Dietetics, ELBS, Churchill Livingstone, London, Baltimore.
- De Maeyer EM (1989) Preventing and Controlling iron deficiency anaemia through Primary Health Care, WHO, Jelliffree DS (1966) the Assessment of Nutritional status of the community, WHO Geneva.
- Gopaldas T and Sheshadry S. (1987) Nutritional Monitoring and Assessment, Oxford University Press, New Delhi.
- Shukla PK (1982) Nutritional problems of India, Prentice Hall of India Private Limited, New Delhi.
- NFHS 4 Report for India As well as Rajasthan.
- Nutrition News, NIN Hyderabad.

- Nutrition Foundation of India Bulletin, New Delhi.
- Shills, M.E. and Young VR and Bombay KN (1988), Modern Nutrition in Health and Disease, Varghese Company, VII Edition.
- Beaton GH and Bengoa JM, Nutrition in preventive Medicine. The major deficiency syndrome Epidemiology and approaches to control (1976), World Health Organization, Geneva.
- Talwar GP, Textbook of Biochemistry and Human Biology, Prentice Hall of India Pvt. Ltd., New Delhi (1980).
- WHO Z Scores.
- Textbook of Biochemistry and Human Biology Edited by G.P. Talar, Prentice Hall of India Pvt. Ltd., New Delhi (1980).

FHN 211 - COMPUTER APPLICATIONS- PRACTICAL

1. Introduction

- Classification of computers, computer memory,
- Types of Software: Application and system software, operating system and types: Single user, multiuser
- Application of computers for research

2. Data communication and networks

- Data communication concept
- Internet, web-e-mails
- Search engines – Enterprises : e-communication and e-collaboration

3. MS Office and its application

- File handling in windows
- Various version of MS Office
- MS Word : Text formatting
- MS Excel : Features, various formula and function
- MS PowerPoint : creating presentation and adding effects.

4. SPSS

- Introduction to SPSS: definition, objectives and features
- Data analysis using SPSS: data entry, creating variable, switching to data labels.
- Data analysis: frequencies, recording into different variable, cross tabulation and layers

References

1. Computer fundamental – Sinha and Sinha, BPB Publications
2. Introduction to Computer Norton, TAT McGraw Hill.

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3. Computer Fundamental and introduction to IBM – PC Dr. Pankaj Nagar, Manish Soni, Ramesh Book Depot.
4. An Introduction to data base system – Desai, Galgotia publication
5. Computer network – taneubaum, person
6. An introduction to data base system – Kannan/Swamyathan, Person.
7. Fundamentals of computers – V. Rajaram. Prentice Hall.

FHN 212 - NUTRITIONAL BIOCHEMISTRY-II- PRACTICAL

- 1 Titrimetric estimation
 - o Determination of Calcium in milk powder
- 2 Colorimetric estimation
 - o Iron and Haemoglobin
 - o Phosphorus
 - o Protein (Lowry/Biuret Method)
3. Enzymes assays
 - o Alkaline phosphatase
 - o Transaminase
- 4 Paper Chromatographic separation of Amino Acids
 - o Circular
 - o Ascending and
 - o Descending

FHN 213 - FOOD MICROBIOLOGY AND FOOD SAFETY – PRACTICAL

- Study & Use of Compound Microscope
- Disinfection & Sterilization
- Techniques of culture of liquid, semi-solid and solid media, routine and special
- Techniques of staining and differential staining, negative, spore and capsular.
- Isolation of bacteria in pure cultures.
- Isolation of fungi in food items(form of fungi)
- Microbiological analysis of water, milk, curd.
- Field visits to concerned food plants.

FHN 214 - HUMAN NUTRITIONAL PROBLEMS- PRACTICAL

- Preparation of event calendar of past five years for assessment of age.
- Assessment of Nutritional Status of infants using anthropometric measurements.
- Assessment of Nutritional Status of Preschool children using anthropometric measurements.
- Assessment of nutritional status of adolescents using anthropometric measurements.

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- Assessment of Nutritional Status of adult males and females using anthropometric measurements.
- Use of interpretation of growth charts.
- Identification of various clinical signs and symptoms of major nutritional problems of India and assessment of data using grouping methods.
- Determination of Haemoglobin in blood sample of any age group.
- Assessment of nutritional anaemia in community using appropriate biochemical estimations.
- Assessment of diet and nutrient availability of inmates of any hostel/orphanage/old age home etc. using food inventory methods.
- Assessment of nutrient intake of individual using 24 hours dietary recall method.
- Assessment of diet and nutrient intake using qualitative as well as quantitative food frequency questionnaire.
- Visit of malnutrition treatment centers in hospitals.
- Planning and preparation of diets of in-patient admissions of severe acute malnutrition in children.
- Assessment of food intake pattern using diet history methods.

FHN 221 - ENTREPRENEURSHIP IN FOOD PRODUCTS

Objectives

Creating awareness about entrepreneurship as an effective alternative to a white collar job.

Content

- What is entrepreneurship, who is entrepreneur, requirements to be an entrepreneur, promoting entrepreneurship, qualities of an entrepreneur, examples of entrepreneur in the areas of food and nutrition.
- Field visit: the student has to make two visits to any food/nutrition industry/ unit of an entrepreneur, and submit the report.

Reference

- Encyclopaedia of small scale industries and entrepreneurship, Sandeep Sharma, All books – Delhi, 2010.
- Entrepreneurship Management, Nainihal Singh, Allbooks-Delhi, 2010.
- Entrepreneurship, Anil Tandon, Allbooks – Delhi, 2010.
- Women's employment, possibilities of relevant research institute of social studies, Jain D, 1980.
- Towards self reliance, income generation for women, ISI programme of women development, Nayak J, Pinto T and Costa S, 1980.

Objectives

- To understand components of health and fitness and role nutrition in these.
- To understand special concerns like drugs, stress and geriatric nutrition.
- To understand components of special conditions and calamities and develop and assess nutritional requirements during calamities and special conditions.

1. Nutrition Care Process and Dietary Counseling

- Nutrition care process, Interpretation of routine medical & laboratory data, Dietary Counselling process
- Nutritional Assessment of hospitalized patients –
- Methods of nutritional assessment, identification of high risk patients, malnutrition in hospital patient. Special diets and complications during feeding in hospitals.
- Food Allergy and food intolerance. Clinical features, diagnosis and management.
- Infections and Fevers

2. Special pediatric nutrition care and management

- Nutritional care of neonates
- Nutrient modifications and special feeding problems
- Malnourished children- nutrition care, Severe Acute Malnutrition

3. Nutrition in health and fitness

- Diet and exercise,
- Energy input and output
- Effect of specific nutrients on work performance and fitness
- Interrelationship between health, nutrition exercise and fitness

4. Sports nutrition

- Different fuel systems for endurance and power activity,
- Diet manipulation
- Water & electrolyte balance.

5. Interaction of nutrition, immunity and infection

- Nutrition and Immunity
- Nutrient and Drug Interaction
- Nutrition and Stress
 - Metabolic response to stress,
 - Nutritional care during stress
- Diet supplements – Use and Abuse.

6. Nutrition requirements for special conditions

- Natural calamities and emergencies – floods, earthquake, famine/drought/ tsunami
- Gastronautics
- High altitude
- Extreme Environmental temperatures : hot and cold

7. Nutrition Transition

- Nutrition transition and its implications
- Changing trends in lifestyle patterns in population groups
- Nutrigenomics, nutraceuticals, antioxidants and phyto chemicals

References

- L. Kathleen Mahan and Sylvia Escott-Stump. Krause's Food, Nutrition & Diet Therapy .WB Saunders Company, Pennsylvania, USA

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- Bamji MS, Rao NP Reddy V E (2003) Text Book of Human nutrition Second Edition. Oxford & IBH Publishing Co. Pvt. Ltd.
- Gibson RS (2005) Principles of Nutritional Assessment. Second Edition. Oxford University Press.
- NIN (1998) Dietary Guidelines for Indians- A manual, ICMR.
- Shils ME, Olson JA, Shike N and Roos. Modern Nutrition in Health and Disease, Lea & Febiger, Philadelphia
- Sue Rodwell Williams. Essentials of Nutrition and Diet Therapy. Times Mirror/Mosby College Publishing.
- Carol West Sutor and Merrily Forbes Crowley. Nutrition: Principles and Application in Health Promotion

Journals

- Indian Journal of Nutrition & Dietetics
- American Journal of Nutrition
- World Review of Nutrition & Dietetics

FHN 302- PUBLIC HEALTH NUTRITION -I

Objectives

This course will enable the students to:

- Gain insight into national nutritional problems, and national and international contribution towards nutrition improvement in India.
- Development skills in organising and evaluating nutrition projects in the community.
- To be familiar with various approaches to public health nutrition intervention programmes and policies.
- Gain knowledge and skills to develop nutritious recipes for vulnerable groups.

Contents

1. Introduction

- Concept & scope of public Health and Nutrition care in community
- Health Care System
- Levels of Health Care
- National Health Policy
- National Nutritional Policy
- MDGs

2. Public Health

- Multiple cases of PHN problems
- Approaches to solving nutritional problems
- Storage and Food distribution
- Application of Sc & Teach to improve food production and supply
- Food & Nutrition security
- Concept & India's of food and security system

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3. Pop dynamics

- Pop structure and trends
- Inter relationship between nutrition and quality of life
- Health and nutrition implication of ageing population
- National population policy

4. Public Health Aspects of Malnutrition

- Under nutrition and over nutrition
- Deficiency of macro and micro nutrients
- Life Style disorders

5. Economic of Malnutrition: Malnutrition and its economic consequence

References

- The management of nutrition in major emergencies, WHO, 2000.
- Preventive and social medicine, K. Park, 2007.
- Nutrition in the community, the art and science of delivering services, Owen and Owen, fourth edition, 1999.
- Dietary guidelines for Indians, a manual, NIN, ICMR, Hyderabad 2003.
- Programme planning for health education and promotion, Mark B. Dignam, Patricia, A second edition, 1992.
- Nutrition assessment – a comprehensive guide for planning intervention, Margaret D. Simko, Catherine Cowell, Judith A. Gilbridge, Second edition, 1995.
- Food Security Atlas of rural Rajasthan, World food programme, 2009.
- Wadhwa, A and Sharma, S. nutrition in the community, a text book 2003.
- Gibney MJ, Margetts BM., Kearney JM, Arab L (Eds.) 2004. Public Health Nutrition. NS Blackwell publishing.
- Managing Successful Nutrition Programmes ACC/SCN subcommittee on Nutrition.

FHN 303- INSTITUTIONAL FOOD ADMINISTRATION – I

Objectives

This course will enable the students to understand:

- The principles underlying the preparation and service of quality food.
- Developing in students the skill of menu planning for quantity and quality preparation.

Content

- Introduction to Foodservice systems
 - Development of Institutional food services.
 - Food services facility planning – functional planning, atmosphere, workplace design, equipment, space, layout.
 - Consumer behaviour and eating trends

- Organisation and Management
 - Systems approach to Management.
 - Organization – definitions, nature and characteristics of organisation, steps in process of organisation, principles of organisation, departmentation, organisation formats.
 - Management – definitions, management process, roles of a manager, level and skills of management, principles, of management, tools of management, management of resources, functions of management.
 - Financial Management – Principles of accounting function, basic financial statements, tools for comparison and analysis.
 - Energy and time management.
 - Plant and equipment management –
 - Maintenance
 - Sanitation – food, personnel, physical plant and equipment, controlling microbial quality of food.
 - Safety – Accident prevention, 3 Es of safety, safety campaign.
 - Security

References

- Essentials of Management – J.L. Massie, Prentice Hall of India Private Limited, New Delhi, 1992.
- Personnel Management – E.B., Flippo, Mc Graw Hill International Editions, New York, 1984.
- Modern Cookery for Teaching and the Trade – T.E. Phillip. Orient Longman Ltd., Bombay, 1965.
- Manpower Management in the Hotel and Catering Industry – T. Hornsey and D. Daun, Batsford Academic and Educational Ltd., London, 1984.
- Food and Beverage Management and cost control – J. Negi Kanishka Publishers & Distributors, New Delhi, 1999.
- Food and Beverage Costing – J. Negi & G. Manohar, Himalaya Publishing.
- Foods and Beverage Management – A.S. Sudan, Anmol Publications Pvt. Ltd., New Delhi, 2002.
- A Modern Guide to Food Service Equipment – A.C. Avery, CBI Publishing Co. Massachusettes.
- Catering and Food Service Management – J.M. Dewan, Commonwealth Publishers, 1997.
- Food Service Organizations – A Managerial and Systems Approach. Spears M.c. and Vaden A.G., MacMillan Publishing Company.
- Food Service Institutions – West Wood, Shughart and Harger, 1977.
- Catering Management: An integrated Approach – S. Malhan and M. Sethi, 1989.
- Food Service Planning, Layout and Equipment – Kotshevar L.N. & Terrek M.E. 1967.
- The Theory of Catering – Kinton and Ceserani, Edward Arnold, 1974.

FHN 311- ADVANCED HUMAN NUTRITION- PRACTICAL

- Planning and preparation of diet for elderly persons.
- Visit to health clubs, yoga, naturopathy centres.
- Alternative systems for health and fitness like yoga and traditional diets.
- Assessment of physical fitness.
- Market survey of commercial sports supplements.
- Planning and preparation of snacks & drink suitable for various sports activities.
- Planning and preparation of diets for different sports and fitness regimes.

FHN 312- PUBLIC HEALTH NUTRITION – I- PRACTICAL

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1. Conducting community analysis and diagnosis of a given village
2. Assessment of target, resources and constraints.
3. Identification of areas of health and nutrition
4. Collection of information on nutrition interventions.
 - Maternal and child health and nutrition.
 - Food security.
 - Water, hygiene and sanitation

FHN 313 - INSTITUTIONAL FOOD ADMINISTRATION – I- PRACTICAL

1. Carrying out market survey of perishable, non-perishable and processed foods for meal planning.
2. Planning and preparation of meals for various occasions giving general consideration, assumptions, organization chart, budget breakup, menu, cost calculations, comparison of actual and estimated costs and evaluation: Birthday party, Hostel mess
3. Visit to different institutes
4. Run a canteen in the college/department
5. Term paper in any area of IFA

FHN 321- DISSERTATION

Each student will select a research topic and dissertation has to be prepared as per guidelines.

FHN 322- SEMINAR (CONTEMPORARY DEVELOPMENT ISSUES IN FOOD AND HUMAN NUTRITION)

The candidate will work on the selected topic, prepare a report and make a presentation.

FHN 323 - SCIENTIFIC WRITING

Objectives

1. To be able to appreciate and understand the importance of writing scientifically.
2. To develop competence in writing and abstracting skills for different writing needs.
3. To develop the writing ability and to review different types of scientific writing.

Course Content: Theory

Unit 1: Scientific writing as a means of communication and preparing for writing

1. **Different forms of scientific writing:** Articles in journals, research notes and reports, review articles, monographs, dissertation, bibliographies.
2. How to formulate outlines: The reasons for preparing outlines, kinds of outlines e.g., Topic outlines, Conceptual outlines, theme outline.
3. Filling in the outlines and preparing the framework, e.g., drafting titles and subtitles.
4. Tables and illustrations and systematic means of presenting data.
 - a. Titles, rows, columns, footnotes
 - b. Types of illustrations: graphs, diagrams, flow charts

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Unit 2: The writing process and styles of writing

1. Use of outlines as a starting device
2. Making of draft – improving the draft in relation to the objectives
3. Various styles of writing, consistency and other aspects
4. Types of scientific writing – reports, journal papers, abstracts, monographs, dissertation, funding etc.
5. Components of scientific writing – Introduction, Review of Literature
 - a. Methodology, Results and discussion, summary and conclusion
 - b. Limitations, bibliography and appendices
6. Writing a research proposal for grants – justification, rationale and importance of the question being addressed, empirical and theoretical conceptualization, presenting pilot study/data, research proposal and time frame, clarity, specificity of method, clear organization, outcome of the study and its implications, budgeting, available infrastructure and resources, executive summary etc.

References

1. APA (1984): Publication manual of American Psychological Association, 3rd Edition, Washington, APA.
2. Cooper HM (1990): Integrating Research: A guide for literature Reviews, 2nd Edition, California, Sage.
3. Dunn FV and others. Eds (1994). Disseminating Research: Changing profile, NY, Sage

FHN 401- CLINICAL NUTRITION AND DIETETICS

Objectives

- To impart advanced knowledge to students about clinical nutrition and dietetics.
 - To enable the students to understand the special nutrition concerns and the dietary management of various diseases.
 - To give practical insight for assessment, nutritional care and counselling to patients.
1. **Geriatric Nutrition.**
 - Ageing process,
 - Nutritional and Medical problems of elderly
 - Nutritional care and lifestyle modifications in elderly persons
 2. **Nutritional Management of neurological disorders**
 3. **Classification, Aetiology, Clinical features ,diagnosis, prevention & dietary management of:**
 - Gastrointestinal Diseases-GERD, Peptic Ulcer, Constipation, Diarrhoea, Celiac Disease, Irritable Bowel Disease, Malabsorption Syndrome, Ulcerative Colitis
 - Liver Diseases:-Hepatitis, Liver Cirrhosis, Hepatic Coma
 - Cancer
 - Surgery & Burns
 - Renal Disorders:-Glomerulonephritis, Nephrotic Syndrome, Acute & Chronic Renal Failure
 4. **Classification, Aetiology, Clinical features ,diagnosis, prevention & dietary management of:**
 - Cardiovascular Diseases:-Hypertension, Coronary Heart Disease, Hyperlipidemias,
 - Diabetes mellitus

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- Obesity & Eating disorders
- Human Immuno Deficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS)

References

- Walker WA & Watkin SJB .Nutrition in Pediatrics: Basic Sciences and Clinical Applications. Third Edition.2003, BC Decker Inc. Hamilton, Ontario.
- Dorland WA Newman. Dorland's Illustrated and medical Dictionary. WB Saunders.
- L. Kathleen Mahan and Sylvia Escott-Stump. Krause's Food , Nutrition & Diet Therapy .WB Saunders Company, Pennsylvania, USA
- Shils ME, Olson JA, Shike N and Roos. Modern Nutrition in Health and Disease, Lea & Febiger, Philadelphia
- Sue Rodwell Williams. Essentials of Nutrition and Diet Therapy. Times Mirror/Mosby College Publishing.
- Carol West Suitor and Merrily Forbes Crowley. Nutrition: Principles and Application in Health Promotion

Journals

- Journal of American Dietetic Association
- American Journal of Nutrition
- World Review of Nutrition and Dietetics

FHN 402 - PUBLIC HEALTH NUTRITION - II

1. Programme Planning and Management

- Health planning cycle
- Management techniques
- Characteristics of commonly used health and nutrition education materials

2. Nutrition Programmes

- ICDS
- Macro nutrient deficiency programme
- Micro nutrient deficiency programme
- Supplementary feeding programmes – MDMP, SNP, PMGY, Balwadi feeding programme, ANP, TNINP

3. Nutrition education communication programme in conceptualization formulation, implementation and evaluation

4. Nutrition surveillance :

- Objectives
- Indicators
- Data source
- Agencies for nutrition surveillance in India

FHN 403- INSTITUTIONAL FOOD ADMINISTRATION – II

- Food Management

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- Food Acceptability and Sensory Evaluation – definition, application, difference between organoleptic and sensory evaluation, qualification and types of panellists, testing area, methods of sensory testing.
- Menu planning – importance of menu planning in food service organisation, types of menu and their application, factors affecting menu planning, steps in menu planning.
- Food Purchasing – Market and the Buyer, forecasting in foodservice, methods of purchasing, mode of purchasing (centralized and group purchasing), purchasing process and records, vendor selection and evaluation.
- Food production – Principles of food production, methods of food production, production controls, quantity and quality control.
- Receiving and store room management - Elements of receiving, receiving process, dry storage, low temperature storage.
- Food cost control – factors affecting food cost, pricing the products.
- **Food service Management**
 - Delivery and service of food in different food service system.
 - Styles of service
 - Dining room management
- **Manpower Management**
 - Functions of personnel manager
 - Leadership – qualities and responsibilities of a leader, style and theories of leadership, motivation.
 - Employment process
 - Performance Appraisal and MBO
 - Employee facilities and benefits
 - Labour Cost Control
 - Union and contract negotiations
 - Food and Labour Laws affecting foods service operations.

FHN 411- CLINICAL NUTRITION AND DIETETICS- PRACTICAL

- Market Survey of Commercial Nutrition Supplements. Oral supplements, Tube feeding and parenteral preparations available in market.
- Planning, calculation, preparation, service, evaluation and dietary counselling for therapeutic diets covered in theory.
- Case study of two patients in hospital (patient profile, anthropometry, drugs prescribed, laboratory investigations, diet and follow up).

FHN 412 - PUBLIC HEALTH NUTRITION - II- PRACTICAL

Collection of literature on nutrition intervention

Maternal and child health and nutrition

Food security

Water, hygiene and sanitation

Programme planning, implementation and evaluation on any one area identified by each student.

FHN 413 - INSTITUTIONAL FOOD ADMINISTRATION – II- PRACTICAL

1. Carrying out market survey of perishable, non-perishable and processed foods for meal planning.
2. Planning and preparation of meals for various occasions giving general consideration, assumptions, organization chart, budget breakup, menu, cost calculations, comparison of actual and estimated costs and evaluation: Theme party, Special cuisine, etc
3. Visit to different institutes
4. Run a canteen in the college/department
5. Term paper in any area of IFA

FHN 421 - DISSERTATION

In this semester, the student will complete the research work and submit dissertation for evaluation.

FHN 422 - SEMINAR(CONTEMPORARY DEVELOPMENT ISSUES IN FOOD AND HUMAN NUTRITION)

The candidate will work on the selected topic, prepare a report and make a presentation.

FHN 423 - SCIENTIFIC WRITING

1. Several exercises will be conducted to train the students to develop writing skills in preparing outlines of technical reports, Scientific paper, Scientific abstracts, Review article, Research notes, Monographs, Dissertation, Bibliographies.
2. Submitting a research proposal.
3. Use of computer graphics to support scientific writing

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Syllabus

M.Sc. Development Communication & Extension

2. Eligibility:

A candidate who has secured more than 50% or CGPA of 3.0 in the UGC Seven Point scale [45% or CGPA 2.5 in the UGC Seven Point Scale for SC/ST/Non-creamy layer OBC] or equivalent in the Bachelor degree in Science or Engineering or Technology or Medicine or Pharmaceutical Science shall be eligible for admission to First Semester of a Master of Science course.

3. Scheme of Examination:

- (1) Each theory paper EoSE shall carry 100 marks The EoSE will be of 3 hours duration. Part 'A' of theory paper shall contain 10 Short Answer Questions of 20 marks, based on knowledge, understanding and applications of the topics/texts covered in the syllabus. Each question will carry one mark for correct answer.
- (2) Part "B" of paper will consist of Four questions with internal choice (except in cases where a different scheme is specifically specified in the syllabus_ of 20 mark each. The limit of answer will be five pages.
- (3) Each Laboratory EoSE will be of four/six hour durations and involve laboratory experiments/exercises, and viva-voce examination with weightage in ratio of 75:25.

4. Course Structure:

The details of the courses with code, title and the credits assign are as given below.

Abbreviations Used

Course Category

CCC: Compulsory Core Course

ECC: Elective Core Course

OEC: Open Elective Course

SC: Supportive Course

SSC: Self Study Core Course

SEM: Seminar

PRJ: Project Work

RP: Research Publication

Contact Hours

L: Lecture

T: Tutorial

P: Practical or Other

S: Self Study

Relative Weights

IA: Internal Assessment (Attendance/Classroom Participation/Quiz/Home Assignment etc.)

ST: Sessional Test

EoSE: End of Semester Examination

First Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EOSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	DCE 101	Community Organization	CCC	4	4	0	0	3	0
2.	DCE 102	Advanced Development Communication	CCC	4	4	0	0	3	0
3.	DEC 103	Entrepreneurship	ECC	4	4	0	0	3	0

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		Development for Women							
4	DCE 104	Statistics	CCC	4	4	0	0	3	0
5	DCE 105	Indian Social Environment	SSECC	4	0	0	0	3	0
6	DCE 111	Community Organization	CCC	4	0	0	6	0	4
7	DCE 112	Advanced Development Communication	CCC	4	0	0	6	0	4
8	DEC 113	Entrepreneurship Development for Women-1	ECC	4	0	0	6	0	4
9	DEC 114	Communication Skills	CCC	4	0	0	6	0	4

CCC = 24, ECC = 08, SSECC = 04

Second Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	DCE 201	Research Methodology	CCC	4	4	0	0	3	0
2.	DCE 202	Non formal education	CCC	4	4	0	0	3	0
3.	DCE 203	Extension Programme Management	CCC	4	4	0	0	3	0
4	DCE 204	Indian Economic Environment	SSECC	4	0	0	0	3	0
	DEC 211	Computer Application	CCC	2	0	0	2	0	3
5	DCE 212	Non Formal Education	CCC	4	0	0	6	0	4
6	DCE 213	Extension Programme Management	CCC	6	0	0	9	0	4
7	DCE 214	Entrepreneurship Development for Rural Women-II	ECC	4	0	0	6	0	4
8	DCE 215	Contemporary Development and Issues in Home Science	SSECC	4	0	0	0	0	4

CCC = 24, ECC = 04, SECCC = 08

Third Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	DCE 301	Evaluation in Extension	CCC	4	3	1	0	4	0
2.	DCE 302	NGO Management	ECC	4	3	1	0	4	0
3.	DCE 303	Mass Media for Development-I	CCC	4	4	0	0	3	0
4	DCE 304	Public Health & Nutrition-1	ECC	4	4	0	0	3	0
5	DCE 311	Evaluation in Extension	ECC	2	0	0	3	0	0
6	DCE	NGO Management	ECC	2	0	0	3	0	0

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7	DCE 313	Mass Media Development -1	CCC	4	0	0	6	0	4
8.	DCE 314	Textile Dyeing and Printing	ECC	2	0	0	3	0	4
9.	DEC 321	Dissertation-I	CCC	6	0	0	9	0	6
10.	DEC 323	Scientific Writing-I	CCC	4	2	0	3	0	3

ECC = 24, CCC = 12

Fourth Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	DCE 401	Extension Administration Supervision	CCC	4	4	0	0	3	0
2.	DCE 402	Mass Media for Development - II	CCC	4	4	0	0	3	0
3.	DCE 403	Gender Sensitization for Empowerment	ECC	4	4	0	0	3	0
4	DCE 404	Human Rights and Duties	ECC	4	4	0	0	3	0
5	DCE 411	Extension Administration and Supervision	CCC	2	0	0	3	0	4
6	DCE 412	Mass Media For Development - II	CCC	6	0	0	9	0	4
7	DCE 413	Home Food Production	ECC	2	0	0	3	0	4
8	DCE 421	Dissertation - II	CCC	6	0	0	9	0	6
9.	DCE 423	Scientific Writing II	CCC	4	2	0	3	0	3

CCC = 26, ECC = 10

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DCE-101 Community Organization: Theory

Objective: To enable students to

- Understand the principles of Community Organization.
- Acquire skill in developing leadership in rural people.
- To develop understanding about group behaviour and dynamics for effective communication and group management.

Content:

❖ Concept of community or community structure and organization

- **Community:** Concept and characteristics of a community, structure and organization of different types of communities, tribal, rural and urban and urban slums.
- **Community Organization, Concept:** Meaning and scope of community organization, principles of community organization, the process of community organization, identifying the role of individuals in the community.
- **Community Organizer:** Role and qualities of a community organizer.

❖ Group Dynamics

- **Community Organization:** PRIs, Cooperatives, youth organizations, other organizations for community empowerment.
- **Concept of Group Dynamics:** Meaning, characteristics, types and functions of groups, stages and process of group formation, group norms and structure.
- **Components of Group Dynamics:** Cooperation, competition, communication, group pressure, group cohesiveness, leadership etc. Managing group team building.

❖ Leadership in Community

- **Leadership:** Concept, Theories of leadership.
- **Training for Developing Leadership:** Methods of identifying leaders, training for leadership.

DCE-102 Advanced Development Communication: Theory

Objectives: To enable students to:

- Understand the various facets of communication and its significance for extension and national development.
- Understand different forms of media and ways to promote them.

Contents

❖ Concept and historical overview of development

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- Status of development and communication during the period of great development 3500 BC-1500 AD, period of colonization 16th-20th century AD and the post independence period.
- **Development Communication approaches in post independence India:** Communication effects, and modernization, diffusion, basic needs, integrated development, self development and participation.
- **Communication Media: Use and application**
 - **Mass Media:** T.V., Radio, Video, Print.
 - **Interactive media:** Interpersonal methods, computer networks
 - **Folk Media:** Folk songs, puppetry, drama, songs, stories, etc.
- **Promotion of Development Communication**
 - **Government efforts:** Role of Government agencies like Akashwani, DAVP, IEC Bureau, Resource Centers, IIMC, Songs and Drama Division etc.
 - **Non-Government effort:** Role of NGOs in development.
 - **Community Effort:** Role of Agencies of local self Government and local organization.
- **Recent advances.**

References:

- Melcote S.R.: Communication for Development in the Third World – Theory and Practice, Sage Publications, New Delhi, 1991.
- Mehta SR (Ed.): Communication and Development: Issuer and Perspective, Rawat Publications, Jaipur – 1992.
- Modi Bella: Designing Message for Development Communication and Audience Participation- Based Approach, Sage Publications, New Delhi- 1991.
- Melcote, S.R. and Vallath C.: Communication Gap in Development, Rawat Publications, Jaipur – 1992.
- Sharma S.C.: India Communication and Development. Rawat Publications, Jaipur-1987.
- Nair K.S. and White Shirley (Eds.) Perspective of Development Communication. Sage Publications, New Delhi – 1993.
- Dua, M.R. and Gupta V.S.: Media and Development, AMIC Singapore and Har Anand Publications, New Delhi – 1994.
- Reddy A.A. : Extension Education, Sri Lakshmi Press, Bapalta 1971.
- Directorate of Extension, Extension Education in Community Development, Ministry of Agriculture, Government of India-1971.
- Rogers, Everett M.: Diffusion of Innovations, Free Press, New York- 1962.
- Government of India, Directorate of Extension New Delhi: Extension Education of Community Development.
- Saville. A.H. : Extension in Rural Communities, Oxford University Press, 1965.
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- Dc,D : A Handbook of Extension Education, Agrobios, Jodhpur, 2010.
- Govind and Tamilsalvi : Extion Education and Rural Development, Agrobios, 2010.

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DCE-103 Entrepreneurship Development for Women: Theory

Objectives: To enable students to:

- Develop understanding of enterprise
- Develop understanding about entrepreneurial growth
- Understand the various infrastructures for employment and income generation.
- Acquire skills in planning project proposals.

Course Content

❖ Introduction

• Entrepreneurship

- Concept of entrepreneurship.
- Growth of entrepreneurship in India.
- Role of entrepreneurship.
- Factors affecting entrepreneurial growth.

• Women Entrepreneurship

- Status and categories of employment of women in India.
- Challenges of women entrepreneurs.
- Entrepreneurial opportunities in different sectors.
- Entrepreneurship development programmes.

❖ Enterprise Establishment

• Essentials of Enterprise Setting

- Drafting of project proposal.
- Insurance.
- Registration.
- Support systems: Financial and non-financial.
- Enterprise feasibility & viability - Technical, Financial, Social.

• Legal aspects

- Business and Industrial laws.
- Taxation.

• Enterprise Implementation and Monitoring.

• Enterprise Growth and Development: Expansion and Diversification.

• Enterprise failure: Causes and remedies.

❖ Management of Enterprise

• Finance

- Concept of the need for book keeping and accounting.
- Maintenance of essential account records.
- Money: handling and resourcing working capital.
- Costing and pricing.
- Profit and loss calculation.
- Auditing and preparation of balance sheets.

• Store: Purchasing, managing stores, and organizing production.

• Personnel: Organizing workers for better performance: Basic principles and techniques.

• Marketing

- Marketing infrastructure.
- Advertising and salesmanship.
- Quality control, maintaining and improving standards.
- Packaging.

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- o Standardization (ISO, BIS Agmarks and others).
- Success stories – Chetna, Lizzat etc.

References

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- Nayak, J. Pinto, T. and Costa, S. Towards Self reliance, Income Generation for Women, ISI Programme of Women’s Development, 1980.
- Mitra, A. The Status of Women, Household and non-Household Economic Activity, ICSSR Programme of Women’s Studies III Allied, 1979.
- Bhatt, E.R. Economic Status of Self Employed Women in Garment Industry, Gandhi Majdoor Sevalaya, Ahmedabad, 1979.
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- Young Trevor L. Implementing Project, Sterling Publishers Pvt. Ltd., New Delhi, 1998.
- Akhouri, M.M.P. Entrepreneurship for women in India, New Delhi, NIESBUD, 1990.

Periodicals:

- Yojana, Publication Division, New Delhi
- Kurukshetra Publication Division, New Delhi

DCE-104 Statistics: Theory

Theory:

- Meaning and Scope of Statistics.
- Classification and Tabulation
- Graphic and Diagrammatic representation of data (frequency, histogram, graphs, bar-Diagram and pie-charts).
- Measure of Central tendency and Dispersion (Mean, Median, Mode, Quartiles, Range and Standard Deviation).
- Correlation and Regression: Correlation and its interpretation. Product Moment and Rank order Correlation Coefficient Regression Equations (without derivation) and its interpretations, use for prediction.
- Elementary ideas on probability (Simple Probability) Skewness and Kurtosis definition). Elementary ideas of random variable and its density function (Binomial,

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poison, Uniform Normal varieties, Normal Distribution and its properties, Use of Normal Probability Tables).

- Elements of Testing a Statistical Hypothesis – Formulation of the problem, Definition of type I and II errors. Level of Significance, t-test, Z-test.
- Design of Experiments: Analysis of Variance.
- Non-Parametric Inference: Sign, Mann-Whitney and χ^2 test (as goodness of fit and independence of attributes in 2x2 and r x c contingency tables).
- Use of computer of statistical analysis using, SPSS.

References:

- Simpson & Kafka : Basic statistics (Oxford & I.B.H. Publishers)
- Taro Yamane : Sampling Theory.
- Goon, Gupta, Das: Fundamentals of Statistics Vol. I and II Gupta.
- Snedecor & Cochran : Statistical Methods (Oxford and I.B.H. Publishers).
- Shukla M.C. & Gulshan S.S. : Statistics. Theory and Practise (Sultan Chand & Co.)
- Gupta S.P. : Statistical Methods (Soltan Chand & Co.).
- Good C.V. and Carter D.E. : Methods of Research – Educational Psychological, Sociological Application (Century Craft, New York – 1954)
- Kerlinger FA. : Foundations of Behavioural Research (Century Craft, New York, 1966).
- Yound P.V. & Schind C.G.: Scientific Social Survey and Research (Prentice Hall, New Delhi - 1968).
- Philips B.S. : Social Research, Strategy and Tactics.
- Mussen Paul: Hand Book of research Methods in Child Development
- Devdas R.P. & : Hand Book of Research Methodology Kulandaivel (Sri Ram Krishna Mission Vidyalaya 1971).

DCE-105 Indian Social Environment: Theory

Objectives: To enable student to:

- Understand the types of society in India.
- Study the social changes taking place and their impact on society.

Content:

- **Rural Sociology:** Characteristics /Orientations of Indian rural and tribal sociology, rural urban differences.

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Social Change: Nature, meaning and direction of social change, impact of urbanization and industrialization on the rural community, factors contributing to social change, role of women in social change, Dynamics of social changes, urban growth and migration, migrational pattern and urbanization issues. Planned social change, concept, perspective and thrusts.

- **Resources:** Water and Land and Forest: Availability, Utilization and Conservation.
- **Agriculture in India:** Status of agriculture in Indian economy, problems of agriculture. Cause for low agricultural productivity, defects and problems of agriculture marketing, Government policies of improving marketing.
- **National Food Production Programmes:** National and state scheme for increasing food production - agriculture animal husbandry, fisheries, concept of green, blue, white and yellow revolutions, intensive production schemes.

References:

- Singh, K. Principles of Sociology, Prakashan Kendra, 1977.
- Chowdhary, P.A. Hand of Social Welfare, Atma, Ram and Sons.
- D'Souza Social Structure of a Planned City.
- Bergel, E. Urban Sociology.

DCE-111 Community Organization: Practical

Study of the following community organizations in the locality with special reference to their structure, function, strengths and weaknesses:-

- SHGs
- Youth organizations,
- NGO's and
- Caste based organizations.

DCE-112 Advanced Development Communication: Practical

- Practical in using participatory approach for assessment of needs for planning village based extension programmes and their management from the area of Home Science.
- Preparation of software for interpersonal communication extension teaching aids.

DCE-113 Entrepreneurial Development for Women- I

- Visit to a micro enterprise and preparation of a report.
- Special lectures by the representatives from the various agencies specially financial agencies.
- Visits to marketing agencies.
- Study of the registers and records maintained by entrepreneurs.
- Prepare a project report.

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DCE-114 Communication Skills

Objectives: The students should be able to:

- Apply theories and principles of communication.
- Develop and apply skills of oral presentation, discussion, writing composition, CV, minutes reports.
- Read and write notes from different sources.
- Search and interpret information from various sources.
- Use appropriate skills in interpreting and answering oral and written questions in tests, examinations and other contexts.

Content:

❖ **Searching Information:**

- Using library and internet.
- Using a dictionary and encyclopedia, thesaurus.

❖ **Taking and making notes:**

- Notes taking skills.
- Notes making skills.

❖ **Oral presentation:**

- Treatment of reports for presentation.
- Practice in using media in oral presentation.

❖ **Reading skills:**

- Skimming and scanning skills.
- Intensive and extensive reading.
- Copying with unfamiliar words.

❖ **Writing skills:**

- Referencing skills.
- Composition writing.
- Writing curriculum vitae (CV) and minutes.

References:

- Harmer, J. (1991), The Practice of English, Language Teaching: Longman Group UK.
- Meenakshi Raman and Sangeeta Sharma, Technical Communication- Principles and Practice, Oxford University Press, New Delhi (2004)
- Barker, A.- Improve Your Communication Skills – Kogan Page India Pvt. Ltd, New Delhi (2006)
- Adrian Doff and Christopher Jones – Language in Use (Upper – Intermediate), Cambridge University Press, First South Asian Edition (2004)
- John Selly, The Oxford Guide to Writing and Speaking, Oxford University Press, New Delhi (2004)

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DCE-201 RESEARCH METHODOLOGY

Research- Purpose and objectives.

- Research Design, Purpose of Research Design, Types of Research Design – Experimental and Descriptive.
- Definition and Identification of a Research Problem, Selection of problem, hypothesis, basis assumption and limitations of the problem.
- Techniques of sampling – Census & Sampling methods, probability and non-probability sampling procedures, sample size.
- Data gathering instruments Measurements and scales, Reliability and validity of measuring instruments – Questionnaire, Schedule, Score Card and Checklist.
- Methods of collecting data: Questionnaire, interview technique, observations, case study, focus group discussion, in depth interview.
- Planning, Executing and Analysis of Large scale surveys with special emphasis on surveys in Home Science.
- Presentation and preparation of report for dissertation publication.
- Review of literature: Importance, sources and writing review of literature.
- Bibliography: Importance of method of writing references of books, Journals, proceedings and websites.

Reference:

- Simpson & Kafka : Basic statistics (Oxford & I.B.H. Publishers)
- Taro Yammne : Sampling Theory
- Goon, Gupta, Das: Fundamentals of Statistics Vol. I and II. Gupta
- Snedecor & Cochran: Statistical Methods (Oxford and I.B.H Publishers)
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- Gupta S.P.: Statistical Methods (Soltan Chand & Co.).
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- Kerlinger F.A.: Foundations of Behavioral Research (Century Craft, New York, 1966).
- Yound P.v. & Schind C.G. : Scientific Social Survey and Research (Prentice Hall, New Delhi – 1968).
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- Mussen Paul : Hand Book of Research Methods in Child Development.
- Devdas R.P. & : Hand Book of Research Methodology Kulandaivel (Sri Ram Krishna Mission Vidyalaya 1971).

DCE-202 Non Formal Education: Theory

Objectives: To enable students to:

- Understand the need for adult education and functional literacy.
- Acquire knowledge and skills in organizing adult education and functional literacy programmes.

Content:

- **Concept:** Concepts of formal, informal, non-formal, continuing and social education, functional literacy UNESCO's definition.
- **Genesis of the Non-formal Education Programme in India:** Historical development of the non formal education programmes in India, growth of the programme. NLM framework and Norms: Scheme of assistance to voluntary agencies by the Govt. of India.
- **Agencies involved:** Role of Indian Adult Education Association, Indian University Association for Continuing Education, State Resource Centre, Universities, Role of the Department of Education and Adult Education in the Centre and States. NLM authority, SLM authority, Jan Shikshan Sansthan.
- **Curriculum of Non-formal Education:** Preparation of need based curriculum for different kinds of adult education and functional literacy programmes for adults.
- **Materials for adult education-** primers, teacher guides, work books and Instructional aids. Preparation, selection and use of different learning materials for various target groups. Use of various extension teaching methods and audio visual aids, relevance of digital primer in adult education for India and the region, importance of the use of folk media.
- **Organization of Non-formal Education Programmes:** Steps in organising adult education programmes, planning and execution of the programme based on the need of adult learners, involving various agencies and institutions.
- Contemporary Programmes by government of India, Bharat Shakshar.

Related Experience

- Assessing the educational status in a nearby village/slum and locating needs.
- Visit to programmes of adult education and functional literacy in the locality.
- Learning the techniques of motivating adults.
- Practice in the preparation and use of primers, work books and instructional aids.
- Evaluation of a functional literacy programme.

References:

- Kumar, O.P. A Guide to literacy and Adult Education Literacy House, 1979.
- Rao, V.K.R.V. Adult Education and National Development Ministry of Education and Youth Services, Govt. of India, 1970.
- Mohsini, S.R. Adult and Community Education, An Indian Experiment, Adult-Education Association, 1973.
- Bordia, A. Farmer's Training and Functional Literacy, Indian Adult Education, 1975.
- Devadas, R.P. Planning and Programme Adult Education. University of Madras, Monograph. XIV, 1978.

- Gupta, M.R. Manual for Adult Literacy Teachers, Indian Adult Education Association, 1974.
- Shah, A. and Bhan S. (Eds.). Non Formal Education and the NAEP, Oxford University Press, 1980.
- Borida et al (Eds.) Adult Education in India, Nachiketa Publishers, 1973.
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- Gangrade, K.D. Community organization in India, Popular Prakashan, 1971.
- Dahama, O.P. and Bhatnagar, O.P. Extension and Communication for Development Oxford and IBH, 1980.

Periodicals:

- Indian Journal of Adult Education. Indian Adult Education Association, New Delhi.
- Social Change, Council of social Development, New Delhi.
- Indian Journal of Extension Education, Indian Society of Extension, Education, New Delhi.

DCE-203 Extension Programme Management: Theory

Objectives:

- To understand the issues of extension and development.
- To be aware of the aspects influencing design of development programmes.
- To understand the relationship between the aspects and procedures involved in programme planning, monitoring and evaluation.

❖ **Extension**

- Meaning, scope and concept of extension
- Evaluation of extension and philosophy
- Approaches and systems of extension – current paradigms of extension: national and international perspectives.
- Development issues and agenda- role of extension in facilitating development.

❖ **Programme design and implication**

- Objectives/goal setting; nature and importance of objectives, establishing objectives, identification of problem.
- Planning, philosophy and scope of programme planning, models approaches and principles of planning, type of plan, steps in planning.
- Decision- making: importance, nature, process and techniques. Stakeholders participation in decision – making.
- Programme implementation: aspects influencing monitoring and control, linkage with other agencies, problems in implementation, feedback system – role of management information systems.

❖ **Evaluating impact**

- Programme evaluation: scope and purpose of evaluation types, criteria, tools, techniques and indicators for evaluation.

- Stakeholder's participation, problems in evaluation, evaluating sustainability, empowerment and development changes.
- Report writing and documentation: preparing a project report: various approaches, need and procedure for reporting and recording.

❖ **Resources for developmental programmes**

- Types of agencies funding development programmes, nature of support, writing proposals obtaining grants.
- Fundraising-importance, nature and techniques.
- Non-financial donations and in-kind giving – nature sources impact on development initiatives.
- Corporate social responsibility – concept, meaning, importance, historical and contemporary perspectives, dimensions of CSR, corporate partnership for development impact and analysis.

References:

- Burkley, S. (1993) People First: A Guide of Self Reliant Participatory Development. London: Zed Books.
- Centre for Development and Human Rights (2003) The Right to Development, New Delhi.
- Drez, J. and Sen, A.K. (1995) India-Economic Development and Social Oxford University, Press.
- Edwards, M. and Hulme, D. (1992) Making a Difference: NGOs and Development in a Changing World. London: Earthscen Publications Ltd.
- Edwards, M. and Hulme, D. (1996) Beyond the Magic Bullet: NGO Performer and Accountability in the Post Cold War World. West Hartford, Connecticut: Kumarin Press.
- Fischer, J. (1998) NGOs and Political Development of the Third World. Connecticut: Kumar in Press.
- Grayson, D. and Hodges, A. (2004) Corporate Social Opportunity. Sheffield, U.K.: Greenleaf Publishing Ltd.
- Gedam, R. (1991) Development planning – Origin and Growth. New Delhi: Akashdeep Publications.
- Ilsey P.J. (1990) Enhancing the Volunteer Experience. San Francisco: Jossey-Bass.
- Korten D.C. (1990) People Centered Development – Greeting to the 21st Century, West Hartford Kumarin.
- Kumar S. (2002) Methods for Community Participation. New Delhi: Sage Publications.
- Padaki. V and Vaz M. (2003) Institutional Development in Social Intervention: New Delhi: Sage Publications.
- Pareek U. (1989) Behavioral Process in Organizations. New Delhi and Oxford and IBH.
- Reidar, D. (2004) Evaluating Development Programme and Projects New Delhi: Sage Publications.
- Singh, K. (1999) Rural Development – Principals Policies and Management. New Delhi: Sage Publications.

DCE-204 Indian Economic Environment: Theory

Objectives: To enable students to:

- Understand the economic structure of communities in India.
- Become aware of the problems of Indian Economy and linkages with Sustainable Development and efforts taken to improve the rural economy.

Theory

- Introduction to economic environment; micro and macro economics, classification of economics – capitalistic, socialist, mixed economy.
 - Close, open economy.
 - Globalization – Impact of globalisation upon rural economy.
- ❖ **Introduction to Rural Economic Structure:** Basics of rural economic structure, changing of Indian economy, nature and significance of agriculture in the economy, role of women in farming.
 - ❖ **Importance of structure of Agricultural markets:** Methods of sale, defects and problems of marketing, Government Policies improving marketing.
 - ❖ **Employment:** Occupational structure in India, primary and subsidiary occupations, problems of unemployment, measures taken by the government to solve the problem of unemployment. Related government programmes.
 - ❖ **Rural Industry:** Cottage and small scale industry, role in the economic development, Gandhian economic concept. Scope for self sufficiency, decay of cottage industries – causes and effects.
 - ❖ **Rural Credit:** Meaning, Importance and need of credit for a rural Family. Agencies supplying credit to rural families and practical difficulties in securing and repaying credit, Role of bankers and micro finance institutions.
 - ❖ **Cooperation:** Principles of Cooperation, progress of cooperative movement in India, types of cooperative, cooperation in the development of the weaker sections.

References:

- Dutt. R.M. and Sundaram, K.P.M. Indian Economy, Niraj Prakashan, 1977.
- Agrawal, A.N. Indian Economy – Problems of Development and Planning, Vikas, 1983.
- Dhingra, I.C. The Indian Economy – Resources planning, Sultan Chand, 1983.
- Sundram, K.P.M. Introduction to Indian Economy, R. Chand 1983.
- Dhingra, T.C. Agricultural Economy of India, S. Chand, 1983.
- Indian-year books, Publication Divisions, Ministry of Information & Broadcasting.

Periodicals:

- Yojana, Publication Division, New Delhi.
- Kurukshetra, Publication Division, New Delhi.

DCE-211COMPUTER APPLICATION

❖ Introduction:

- Classification of computers, computer memory,
- Types of Software: Application and system software, operating system and types: Single user, multiuser
- Application of computers for research

❖ Data communication and networks:

- Data communication concept
- Internet, web-e-mails
- Search engines – Enterprises : e-communication and e-collaboration

❖ MS Office and its application:

- File handling in windows
- Various version of MS Office
- MS Word : Text formatting
- MS Excel : Features, various formula and function
- MS Power Point: creating presentation and adding effects.

❖ SPSS:

- Introduction to SPSS: definition, objectives and features
- Data analysis using SPSS: data entry, creating variable, switching to data labels.
- Data analysis: frequencies, recording into different variable, cross tabulation and layers

References:

- Computer fundamental – Sinha and Sinha, BPB Publications
- Introduction to Compute Norton, TAT McGraw Hill.
- Computer Fundamental and introduction to IBM – PC Dr. Pankaj Nagar, Manish Soni, Ramesh Book Depot.
- An Introduction to data base system – Desai, Galgotia publication
- Computer network – taneubaum, person

- An introduction to data base system – Kannan/Swamyathan, Person.
- Fundamentals of computers – V. Rajaram. Prentice Hall.

DCE-212 Non Formal Education: Practical

- Each student will gain experience both in survey technique and preparation of instructional material
- Assessing the educational status in a nearby village and identifying needs.
- Practice in preparation of instructional material and pamphlets for non-formal education programme.
- Visits to programmes of adult education and functional literacy.

DCE-213 Extension Programme Management: Practical

- Development of communication skills by using prepared soft media in the field situation.
- Development of extension teaching methods according to stages of learning.
- Use of extension methods in the field.
- Select one corporate house and document. Its extension activities/concerns.
- Document the agencies providing different resources for extension work.

DCE-214 Entrepreneurship Development for Rural Women-II

- Assessment of entrepreneurial needs in rural area.
- Availability of services.
- Identifying schemes of banks & other agencies rural area.
- Arranging motivational lab for entrepreneurship
- Helping women to prepare the enterprise report in rural area.
- Assessment of entrepreneurial possibilities in rural area.
- Preparing business plan proposal.

DCE-215 Contemporary Developmental Issues in Home Science: Practical

Objectives:

- To enable students to develop insights regarding the developmental issues of Home Science.
- Acquires skills in collecting and organizing subject content on the selected topics.

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- Each student will prepare one seminar paper on any one topic from the areas of H.Sc.
Namely:
 - Food and Nutrition
 - Home Management
 - Clothing and textile
 - Human development
 - Developmental extension
- The seminar paper will be prepared by the students. The students are requested to refer books, mono graphs, reports and websites and later professional journals.

DCE-301 Evaluation in Extension

Objectives: To enable students to:

- Develop skills for evaluation of programmes.

Content:

- **Appraisal, monitoring and evaluation:** concept, definition, meaning and purpose.
 - Formal and informal evaluation.
 - Self evaluation, internal and external evaluation.
 - Summative and formative evaluation.
 - Pre project, concurrent and post project evaluation.
- **Techniques of evaluation:** Criteria for evaluation, principles of developing, tools for evaluation interview schedule, observation schedule, rating scale, attitude scale, score card, check list, records etc.
 - Modern techniques of evaluation CPM, PERT, SWOT, cost benefits, analysis etc.
 - Tools and techniques of participatory evaluation.
 - Monitoring of programme.
 - Difference between evaluation and monitoring, study of monitoring and evaluation frameworks of major development programme of government of India related to women and children.
- **Documentation:** Need for reporting and recording in extension, procedures involved, aspects to be highlighted in records and register to be maintained by extension personnel.
- **Follow-up:** Need for follow-up, methods of follow up, making the programme self sustaining.

References:

- Sharma D.P. **Public Administration in Theory and Practice, kitab Mahal, 976.**

- Dahama O.P. and Bhatnagar O.P. Education and Communication for Development. Oxford and IBH Publishing, 1980.
- Franklin J.L. and Thrashes, J.M. An Introduction to promote Evaluation Jonwiley, 1976.
- Mishra, S.N. and Verma, B.M. Evaluation of Training of Rural Youth for Self Employment (TRYSEM) in Rajasthan.
- Desi, D.K. Management in Rural Development, Oxford and IBH. 1983.
- Haq, M.C. Community Development through Extension, Chugh Publication, 1979.
- Krishna, M. Project Planning in India, HPA, 1983.
- Dubhashi, P.K. Grammar of Planning- Concept and Application, HPA, 1983.
- Fernadez, W. and Tondon, R. Participatory Research and Evaluation Indian Social Institute, 1981.
- Britha Milketeson, Development Research and Practice.

DCE-302 NGO Management

Objectives: To enable students to understand and acquire skill to start and run a NGO.

Content:

- Meaning and genesis of NGOs, voluntary organization and civil societies.
- Role of NGOs in development.
- Start up of NGOs-Constitutional requirements, Registration, Infrastructural creation.
- Creation of funds.
- External – Donor agencies- National and International.
- Internal.
- Strategic Planning & implementation of Development Programmes in different areas of operation.
- Agencies involve in training of NGOs-NIRD, NIPCCD, CAPART, CARPET etc.
- Government policies and programmes for NGOs.
- Documentation and Report writing.

DCE-303 Mass Media for Development-I

Objectives: To enable student to:

- Understand the significance of mass media for extension and national development.
- Understand the special characteristics of mass media.
- Develop skills in writing, editing and producing scripts for mass media.
- Elicit public opinion of specific issues through mass media.

Content:

- Concept, Meaning, types, characteristics and scope in national development.
- Characteristics, relevance and impact of the following specific media:
- Types and brief history of print media, role in modern India, characteristics, functions and impact on society.
- **Print media-** Leaflet, pamphlets, folders, newsletters, newspapers and magazines.
- Writing for print media: sources of information, types of features, principles.
- **Reporting and editing:** Reporting types, qualities of good reporters. Editing- Role of the editor, editorial writing, symbols, cross-culture perspectives.
- **News papers and other media production-** Layout, design, production format, preparation of content and designing of material.
- **Photo journalism-** principles and practices.
- **Public speech-** Principles of writing and delivery of public speech.
- **Advertising and social marketing:** Concept, characteristics, and role of advertising and social marketing.
- **Audience Research:** Concept, importance, methodology reporting.

DCE-304 Public Health & Nutrition- I

Objectives: This course will enable the students to:

- Gain insight into national nutritional problems, and national and international contribution towards nutrition improvement in India.
- Development skills in organizing and evaluating nutrition projects in the community.
- To be familiar with various approaches to public health nutrition intervention programmes and policies.
- Gain knowledge and skills to develop nutritious recipes for vulnerable groups.

Contents:

❖ **Introduction:**

- Concept & scope of public Health and Nutrition care in community
- Health Care System
- Levels of Health Care
- National Health Policy
- National Nutritional Policy
- MDGs

❖ **Public Health:**

- Multiple cases of PHN problems
 - Approaches to solving nutritional problems
 - Storage and Food distribution
 - Application of Sc & Teach to improve food production and supply
 - Food & Nutrition security
 - Concept & India's of food and security system
- ❖ **Pop dynamics:**
- Pop structure and trends
 - Inter relationship between nutrition and quality of life
 - Health and nutrition implication of ageing population
 - National population policy
- ❖ **Public Health Aspects of Malnutrition:**
- Under nutrition and over nutrition
 - Deficiency of macro and micro nutrients
 - Life Style disorders
- ❖ **Economic of Malnutrition: Malnutrition and its economic consequence**

References:

- The management of nutrition in major emergencies, WHO, 2000.
- Preventive and social medicine, K. Park, 2007.
- Nutrition in the community, the art and science of delivering services, Owen and Owen, fourth edition, 1999.
- Dietary guidelines for Indians, a manual, NIN, ICMR, Hyderabad 2003.
- Programme planning for health education and promotion, Mark B. Dignam, Patricia, A second edition, 1992.
- Nutrition assessment – a comprehensive guide for planning intervention, Margaret D. Simko, Catherine Cowell, Judith A. Gilbridge, Second edition, 1995.
- Food Security Atlas of rural Rajasthan, World food programme, 2009.
- Wadhwa, A and Sharma, S. nutrition in the community, a text book 2003.
- Gibney MJ, Margetts BM., Kearney JM, Arab L (Eds.) 2004. Public Health Nutrition. NS Blackwell publishing.
- Managing Successful Nutrition Programmes ACC/SCN subcommittee on Nutrition.

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DCE-311 Evaluation in Extension

- Developing and testing tools for evaluation.
- Study of the records and registers maintained by various extension personnel.
- Evaluation of the extension programmes implemented in the previous semester.
- Preparation of reports.

DCE-312 NGO Management

- The student will be placed in local NGOs for 4-8 weeks to gain Knowledge and skills regarding various aspects of NGOs functioning and thereafter will submit report.

DCE-313 Mass Media Development - I

- Prepare a scrap book of development related news and advertisement from the different print media.
- Visits to print media centres and submit reports.
- Write news and a feature for print media relating to Home Science issues.
- Preparation of leaflets, folders/booklets.
- Visits to print media centres.
- Writing for print media relating to Home Science issues.
- Preparation of leaflets, folders.

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DCE-314 Textile Dyeing and Printing

Objectives: To enable students to:

- Develop an awareness and appreciation of art as seen through traditional textiles of India.
- Understand dyes and their application in designing.
- Develop skills and vocational competence in textile dyeing and printing.

Practical: Max.Marks:50

- **Dyeing:** Preparation of fabric for dyeing and printing:
 - Dyeing of different fibers by different dyes, Cotton and rayon – direct, reactive, azo, vat. Wool - acid. Silk - acid and reactive. Blends-reactive and disperse.
 - Dyeing Methods –
 - ✓ Tie and dye.
 - ✓ Batik.
 - ✓ Plain dyeing – shades – matching.
 - Finishing of dyed clothes.
- **Printing:**
 - Preparation of screen by the photochemical method.
 - Techniques – Screen printing and block printing.
- Printing one colour , two colour and multi colour.
- Printing single motif and all over design, block and screen.
- Finishing of printed goods.
- Preparation of portfolio for dyeing and printing samples.
- Designing and completing four different articles with different fiber content including clothing including clothing wear, household linen, decoration, furnishing etc. using the above technique separately and in combination.

Reference:

- Pandit, S. and Patel, S. Tie and Dye and Batik. Faculty of Home Science, Baroda, 1982.
- Krishna, C. Batik and Tie and Dye, Delhi, Hand Books, 1980.
- Maile, A. Tie and Dye as a Present Day Craft, 1978.
- Weight, R. H. Modern Design and Production. National Trade Press, London, 1978.
- Horseiiall, O.L. The Dyeing of Textile Fibers, Chapman Hall, 1978.
- Richardson, N. How Stencil and Decorate Furniture, Ronald Press, 1980.
- Trotman, E.R. Dyeing and Chemical Technology of Textiles. London, Griffin, 1972.
- Clarko, W. An Introduction of Textile Printing, Newnes. Britterworths, 1979.

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- Chakraverthy, R.P.A. Gillmose on the Chemical Technology of Textile Fibres, Caxton Press, 1979.

DCE-321 Dissertation- I

- ❖ Each student will be given a topic and thesis has to be prepared as per guidelines.

DCE-323 Scientific Writing- I

Objectives:

- To be able to appreciate and understand the importance of writing scientifically.
- To develop competence in writing and abstracting skills for different writing needs.
- To develop the writing ability and to review different types of scientific writing.

Content: Theory

- ❖ **Scientific writing as a means of communication and preparation for writing**
 - **Different forms of scientific writing:** - Articles in journals, research notes and reports, reviews articles, monographs, dissertation, bibliographies.
 - **How to formulate outlines:** - The reasons for preparing outlines, kinds of outlines e.g., Topic outlines, conceptual outlines, theme outlines.
 - Filling in the outlines and preparing the framework, e.g., drafting titles and subtitles.
 - Tables and illustrations and systematic means of presenting data.
 - Titles, rows, columns, footnotes.
 - Types of illustrations: graphs, diagrams, flow charts.
- ❖ **The writing process and styles of writing**
 - Use of outlines as a starting device.
 - **Making of draft:** - Improving the drafts in relation to the objectives.
 - Various styles of writing, consistency and other aspects.
 - **Types of scientific writing:** - Reports, journals papers, abstracts, monographs, dissertation, funding etc.
 - **Components of scientific writing:** - Introduction, Review of Literature
 - Methodology, Results and discussion, summary and conclusion.
 - Limitation. bibliography and appendices.
 - **Writing a research proposal for grants:-** Justification, rational and importance of the question being addressed, empirical and theoretical conceptualization, presenting pilot study/data, research proposals and time frame, clarity, specificity of method, clear organization, outcome of the study and its implications, budgeting, available infrastructure and resources, executive summary etc.

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References:

- APA (1984): Publication manual of American Psychological Association, 3rd Edition, Washington, APA.
- Cooper HM (1990): Integrating Research: A guide for literature Reviews, 2nd Edition, California, Sage.
- Dunn FV and others. Eds (1994). Disseminating Research: Changing profile, NY, Sage.

DCE 401 Extension Administration and Supervision

Objectives: To enable students to:

- Understand the principles of administration, co-ordination and supervision.
- Become aware of the administrative structure of the Rural Development Programme in India.
- Understand basic elements in extension management.

Course Content:

- **Concept:** The meaning. Nature and purpose of administration in extension and rural development.
- Principles of administration and organization.
- **Management:** meaning, nature and task of management.
- **Structure of organization:** Types, uses of centralization and decentralization, issues of delegation, authority and power.
- **Co-ordination:** Meaning, needs types and methods of bringing about co-ordination in extension administration'
- **Supervision:** Meaning, importance and methods of supervision.
- Human Resource Development in extension organization.
- **Extension Administration and Management:** The administrative set up, functions and specific programmes of various departments.

References:

- Sharma D.P. Public Administration in Theory and Practice, Kitab Mahal, 1976.
- Dahama, O.P. and Bhatnagar O.P. Education and Communication for Development. Oxford and IBH Publishing 1980.
- Franklin, J.L. and Thrashes, J.M. and Thrashes, J.M. An introduction to programme Evaluation Jon Wiley, 1976.
- Mishra, S.N. and Verma, B.M. Evaluation of Training of Rural Youth for Self Employment (TRYSEM) in Rajasthan, 1982.
- Desi, D.K. Management in Rural Development, Oxford and IBH, 1983.
- Haq.M.C. Community Development through Extension, Chugh Publications, 1979.
- Krishna, M. Project Planning in India. H.P.A. , 1983.

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- Dubhashi, P.K. Grammer of Planning – Concepts and Application, H.P.A., 1983.
- Fernandez, W. and Tandon, R., Participatory Research and Evaluation, Indian Social Institute, 1981.

DCE-402 Mass Media for Development -II

Objectives:

- To enable the students to understand mass media.
- To develop understanding about different types of media.

Content:

- Concept of mass media, Role of mass media.
- Electronic media types.
- Radio journalism-types and brief history of broadcast media, role in modern India
Characteristics, functioning and impact on society.
- Writing for the radio: characteristics, reach and role of radio, types of radio programmes-
language style, scripting for radio features.
- Reporting for radio-accuracy, balance and credibility, types of reporting for radio news
and programmes.
- Editing and anchoring radio programmes.
- Radio production: Content and style-digital, audio mixing, recording and aesthetics.
- Television journalism -television and films-history, reach and role and impact on society.
- Writing for T.V. programmes-differences from print/radio, information sources, selection,
editing and compilation of information for T.V. programmes.
- Scripting for T.V. programmes-style, language and skills.
- Reporting: Field reporting, compiling and composing, accuracy, balance and credibility.
- Presenting T.V. programmes: types, style, anchoring, live TV broadcasting.
- Production of TV news and programmes.
- ICT and new media-Types, history of ICT and merging new media-role in modern India-
characteristics, functions and impact on society.
- Advocacy and social marketing through electronic media.
- Audience research through electronic media.

DCE-403 Gender Sensitization for Empowerment

Objectives:

- To develop understanding about gender sensitization.
- To develop knowledge in gender sensitization for empowerment.
- To be sensitized to gender disparities/imbalance and problems of women.

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Theory:

- Gender sensitization- meaning, need and importance for empowering women.
- Demographic analysis, demarcation and differentials.
- Factors influencing gender differentials in: health, education, occupation, resources and socio-cultural practices.
- Women development and empowerment-problems and limitations, women and poverty.
- Women empowerment and Millennium Development Goals.
- Role of Department of women and child development, Government of India and local self Government.
- Role of National Commission for women, Central Social Welfare Board, Voluntary Organizations on issues pertaining to women's health, education and work.
- Violence against women: Domestic violence, sexual harassment at work place, rape and indecent representation, immoral trafficking.
- Gender and media: women in different media, discriminations, changing trends.
- Dimensions and methodologies for women's empowerment.
- Technologies and empowerment- gender specific technology, household technology interface, social-cultural interface and women as consumer of technologies.

References:

- Krishanraj, M. and Chanani, K. (1989). Gender and the household domain- social and cultural dimension, Sage Publication, New Delhi.
- Cockburn, Cynthia and Ormod, Susan. (1993). Gender and technology in the making, Sage Publication, New Delhi.
- Mc Neil, Maureen (Ed.) (1989). Gender expertise, Free Association, Books, London.
- Shiva, Vandana (1989). Staying alive-women. Ecology and development, Zed books, London.
- Rose, K (1992). Where women are leaders. The SEWA movement in India- Vistaar Publication, New Delhi.
- Bagchi, J. (Ed.) (2003). Indian women: Myth and reality, New Delhi, Orient Longman.
- Chanana, K. (Ed.) (2003). Socialization, Education and women: Exploration in Gender Identity. New Delhi: Orient Longman.
- Davis, K (2006). Handbook of Gender and Women's Studies. New Delhi: Sage Publication.
- Elizabeth Meehan and Selma Seven Juijsen (Ed.).(2003). Equality, politics and Gender. New Delhi, Sage Publication.
- Gulati, L (2005). A space of her own-personal narratives of twelve women. New Delhi, Sage Publication.
- Jain, D. and Rajput, P. (2003). Narratives for the women's studies. New Delhi, Sage Publication.
- Karlekar, M. (1982). Poverty and women's work: Study of sweeper women in Delhi, New Delhi, Vikas Publication.
- Kelkar, G., Nathan, D. and Walter, P. (Ed.) (2003). Gender relations in for societies in Asia-Patriarchy at Odds. New Delhi, Sage Publication.
- Mathur, K (2004). Countering Gender Violence-Initiatives towards collective action in Rajasthan, New Delhi, Sage Publication.

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- Niranjan, S. (2001). Gender and Space femininity, sexualisation and the female body, New Delhi, Sage Publication.
- Patel, L. and Shukla, N.N. (1978). Family and Gender, New Delhi, Sage Publications.
- Powell, Garry. (1999). Hand book of Gender and Work, London. New Delhi. Sage Publication.

DCE 404 Human Rights and Duties

Objective:

- To enable the students to understand the issues concerning the Rights and Duties in general and the marginalized groups in particular.
- To practice on self those values: self inculcation, Endeavour to live up to those ideas i.e. Duty to respect other rights, respect each other human dignity.

Course Content:

❖ Background of Human Rights

- History and Origin of Human Rights
- Indian constitution and Human Rights
- Human Rights in International context (UN)
 - ✓ Universal Declaration of Human Rights 1948
 - ✓ International covenants on Civil and Political Rights 1966.
 - ✓ International covenants on Economics, Social and cultural Rights 1966
 - ✓ Convention on Elimination of all forms of Discrimination against Women 1979.
 - ✓ Convention on the Rights of the child 1989
 - ✓ UN Declaration and Duties and Responsibilities of individuals 1997
 - ✓ UN High commission for Human Rights and the Committees under the
 - ✓ Various conventions.
- Concept of Human Rights and Duties
 - ✓ Values: Dignity, liberty. Equality, justice, unity in diversity.
 - ✓ Inherent, inalienable, Universal and indivisible
 - ✓ Classification of Rights.
 - ✓ Classification of Duties
 - ✓ Correlation of Rights and Duties
- Human rights and Duties in India
 - ✓ Evolution
 - ✓ Fundamental Rights
 - ✓ Directive Principals of State Policy
 - ✓ Fundamental Duties
 - ✓ Protection and enforcement of Human Rights and Duties
 - Judiciary

- National and state Human Rights Commission and other grievance redressed mechanisms
 - NGOs, social movements and pressure groups
 - Information Media
- Societal Problems in Private and Public Domains
 - Core Problems: Poverty, underdevelopment and illiteracy
 - Some specific Problems:
 - ✓ Commercial and caste conflicts and tensions
 - ✓ Discrimination and violence against women and children sexual
 - ✓ Violence, trafficking child labour, bonded labour and others.
 - ✓ Custodial violence
 - ✓ Problems of health and environmental protection.
 - Importance of internalizing of Human Rights and Duties: Urgent need for not only sensitizing others of Human Rights and Duties. But of practicing on self those values: self inculcation, Endeavour to give up to those ideas-Duty to respect other rights, respect each other human dignity.

References:

- Agarwal, Anil and Sunita Narain (1991). Global Warming and Unequal world A case of Environmental colonialism. Center for science and Environment, Delhi.
- Baxi, Upendra (2002), The Future of Human Rights, Oxford University Press, Delhi.
- Beteille, Andre (2003), Antinomies of Society: Essays on ideology and institutions, Oxford University Press, Delhi.
- Chandhoke, Neera (2003), Conceits of civil Society, Oxford University press, Delhi
- Geetha, V.(2002) Gender, street Publication, Kolkata
- Shanshyam Shan, (1991) Social movements in India, Sage Publication, Delhi.
- Guha, Ramachandra and Madhav Gadgil (1993) Environmental History of India, University of California Press, Berkeley.
- Haragopal, G (1997) the Political Economy of Human Rights, Himachal Publishing, House, Mumbai.
- Menon, Nivedita (ed) (2000), Gender and Politics in India Oxford University Press, Delhi.
- Patel. Sujata et al (2003, Rethinking Social Science in India. Sage ,New Delhi.
- Rao, Anupama (ed.) (2003) Gender and caste: Issues in Contemporary Indian Feminism, Kali for women. Delhi.
- Shah, Nandita and Nandita Gandhi(1992)issues at sake: Theory and Practice in the Contemporary Women's Movement in India, Kali for Women. Delhi

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- Study and prepare a report on the set up at different levels and functions of different hierarchy at:
 - Administrative structure of rural development at National, State, District and Block level.
 - Administrative structure of Women and Child Development at different levels.
 - Women and Child Development, Education, Health, Industries, Finance, Agriculture and Animal Husbandry.

DCE-412 Mass Media for Development-II

- Script writing for
 - ✓ Radio
 - ✓ T.V.
 - ✓ E-newsletters
- Visit to electronic media centre.
- Preparation of Power Point presentation.
- Evaluation of commercial advertisement broadcasted and telecasted on social issues.

DCE-413 Home Food Production

- Layout of kitchen garden.
- Preparation of nursery beds/pots.
- Manures and fertilizers-types and preparation.
- Cultivation of important vegetables-winter and summer.
- Sowing, transplanting, maintenance and harvesting of crops.
- Disease detection, control and treatment.
- Vermi compost preparation.
- Methods of seed and vegetable propagation.

References:

- Mamoria, C.B., Agricultural Problems of India, Kitab Mahal, 1982.
- Choudhary, B. Vegetables, National Book trust.
- Singh, S. and others, fruit Culture in India ICAR.
- Shenai, P.V. Agricultural Development in India: A new strategy in Management. Vikas.
- ICAR, Hand-Book of Agriculture.

- Singh, R. Poultry Production, Kalyani Publishers.
- Singh, B.H. Mushroom Growing in India, Sterling Publishers.

Periodicals:

- Indian Farmers, Digest, Directorate of Communication, G, B. Pant University of Agriculture and Technology, Pant Nagar.
- Indian Farming. Indian Council of Agricultural Research. New Delhi.

DCE 421 Dissertation-II

- ❖ Each student will continue Dissertation as per third semester.

DCE 423 Scientific Writing

- Several exercises will be conducted to train the students to develop writing skills in preparing outlines of technical reports, Scientific paper, Scientific abstracts, review article, Research notes, Monographs, Dissertation, Bibliographies.
- Submitting a research proposal.
- Use of computer graphics to support scientific writing.

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Syllabus

M.Sc. Home Science Human Development

2. Eligibility:

A candidate who has secured more than 50% or CGPA of 3.0 in the UGC Seven Point scale [45% or CGPA 2.5 in the UGC Seven Point Scale for SC/ST/Non-creamy layer OBC] or equivalent in the Bachelor degree in Science or Engineering or Technology or Medicine or Pharmaceutical Science shall be eligible for admission to First Semester of a Master of Science course.

3. Scheme of Examination:

- (1) Each theory paper EoSE shall carry 100 marks The EoSE will be of 3 hours duration. Part 'A' of theory paper shall contain 10 Short Answer Questions of 20 marks, based on knowledge, understanding and applications of the topics/texts covered in the syllabus. Each question will carry one mark for correct answer.
- (2) Part "B" of paper will consist of Four questions with internal choice (except in cases where a different scheme is specifically specified in the syllabus_ of 20 mark each. The limit of answer will be five pages.
- (3) Each Laboratory EoSE will be of four/six hour durations and involve laboratory experiments/exercises, and viva-voce examination with weightage in ratio of 75:25.

4. Course Structure:

The details of the courses with code, title and the credits assign are as given below.

Abbreviations Used

Course Category

CCC: Compulsory Core Course

ECC: Elective Core Course

OEC: Open Elective Course

SC: Supportive Course

SSC: Self Study Core Course

SEM: Seminar

PRJ: Project Work

RP: Research Publication

Contact Hours

L: Lecture

T: Tutorial

P: Practical or Other

S: Self Study

Relative Weights

IA: Internal Assessment (Attendance/Classroom Participation/Quiz/Home Assignment etc.)

ST: Sessional Test

EoSE: End of Semester Examination

First Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	HDF 101	History & Theories of Human Development - 1	CCC	4	4	0	0	3	0
2.	HDF 102	Foundations of Human Development	ECC	4	4	0	0	3	0
3.	HDF 103	Life Span Development-1	CCC	4	4	0	0	3	0
4.	HDF 104	Statistics	CCC	4	4	0	0	3	0
5.	HDF 105	Early Childhood Care & Education	CCC	4	4	0	0	3	0
6.	HDF 111	Life Span Development-1 Practical	CCC	4	0	0	6	0	3
7.	HDF 112	Early Childhood Care and Education	CCC	4	0	0	6	0	3
8.	HDF 113	Methods of Human Study	ECC	4	0	0	6	0	3
9.	HDF 114	Play & Creativity	ECC	4	0	0	6	0	3

CCC (24), ECC (12)

Second Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	HDF 201	Research Methodology	CCC	4	4	0	0	3	0
2.	HDF 202	History & Theories of Human Development -II	CCC	4	4	0	0	3	0
3.	HDF 203	Early Childhood Care Education	CCC	4	4	0	0	3	0
4.	HDF 204	Philosophies, Ideologies and Approaches of ECE	ECC	4	4	0	0	2	0
5.	HDF 205	Adolescence: Development & Challenges	CCC	2	2	0	0	2	0

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6	HDF 206	Life span development –II Adulthood and Aging	CCC	4	4	0	0	3	0
7	HDF 211	Computer Application	CCC	2	0	0	3	0	2
8	HDF 212	Measurement and Evaluation of Psychological testing	ECC	4	0	0	6	0	3
9	HDF 213	Life span development –II Practical	CCC	4	0	0	6	0	3
10	HDF 214	Visit to welfare agencies	ECC	4	0	0	6	0	3

CCC (24), ECC (12)

Third Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	HDF 301	Family Dynamics	CCC	4	4	0	0	3	0
2.	HDF 302	Children with Developmental Disabilities	CCC	6	6	0	0	3	0
3.	HDF 303	Rights, laws and policies for children and adults	CCC	4	4	0	0	3	0
4	HDF 304	Guidance and counselling	ECC	4	4	2	0	3	0
5	HDF 311	Guidance and counselling	ECC	4	0	0	6	0	3
6	HDF 312	Agency Placement	CCC	4	0	0	6	0	3
7	HDF 321	Dissertation	DIS-CCC	6	0	0	9	0	3
8.	HDF 323	Scientific Writing	ECC	4	0	2	3	0	3

CCC (24) ECC (12)

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Fourth Semester

S. No.	Subject Code	Course Title	Course Category	Credit	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	HDF 401	Administration & management of welfare agencies	CCC	4	4	0	0	3	0
2.	HDF 402	Developmental Psycho Pathology	CCC	4	4	0	0	3	0
3.	HDF 403	Cross Cultural Perspectives in Family Studies	CCC	4	4	0	0	3	0
4	HDF 404	Emerging issues in human development	ECC	4	4	0	0	3	0
5	HDF 411	Education and training of children with disabilities	CCC	4	0	0	6	0	3
6	HDF 412	Working with families & communities	ECC	4	0	0	6	0	3
7	HDF 421	Dissertation	DIS-CCC	6	0	0	9	0	3
8	HDF 422	Seminar	SEM-CCC	2	2	0	0	2	0
9.	HDF 423	Scientific Writing II	ECC	4	0	2	2	0	2

CCC (24), ECC (12)

HDF 101 - History and Theories of Human Development-1

1. Historical perspectives and the trends in theoretical and empirical approaches to child/human study and its relevance for pedagogy, psychotherapy and Intervention programs.

2. Principles, basic concepts, critique, implications and comparative analysis of the following theories:-

- Psycho-analytic theory of Sigmund Freud
- Psycho-social theory of Erik Erikson
- Carl-Jung's theory of personality

3. Theories by Neo-Freudians

- Karen Horney
- Harry Stack Sullivan
- Eric Fromm
- Anna Freud

4. Allport's theory of personality

5. Adler's theory

6. Maslow's theory of Self-actualization

References

- Klem, M.D. and white, J.M. (1996) Family theories : An introduction, New Delhi : Sage Publications.
- Valsiner, J (2000) Culture and Human Development London : Sage.
- Gilligan, C. (1982). In a different voice : Psychological theory and Women's development Cambridge : Harvard University Press.
- Armstrong, K. (2005). A short History of Myth. London : Penguin Books Ltd.
- Kessen, W. (Ed.) Handbook of Child Psychology, Vol. I : History, Theory and methods (4th ed.). New York: John Wiley & Sons.
- Baldwin, A.L. (1980): Theories of child development (2nd Ed.) New York: John Wiley & Sons.
- Hall, C.S., Lindzey, G. And Campbell, J.B. (2007). Theories of personality. 4th Ed., India: wiley India pvt Ltd.

HDF 102 -- Foundations of Human Development

1. Principle of Human Development
2. Basic of Human Development: Genes and Chromosomes, Heredity and Environment meaning and Interactions of Heredity and Environment, Chromosomal Anomalies, Recent Advances in Genetics.
3. Early Environment, (critical period): experiments and research.
4. Basic themes in Human Development
 - a) Active Vs Passive organism
 - b) Continuity vs Discontinuity in development
 - c) Learning Vs Maturation
 - d) Cognition Vs Language
5. Factors Affecting Growth and Development

References

- Santrock, J. W. (1983). Life Span Development. Wm. C. Brown Publishers, Dubuque, Iowa.
- Stewart, Clarke, A., Friedman, S. (1987). Child Development: Infancy through Adolescence. John Wiley and Sons, New York.

HDF 103 - Life Span Development - 1

1. Prenatal Development:

- o Stages, Genetics and Environmental Factors, Critical influence
- o Birth Process and Complications, Technological Advances in Prenatal Monitoring and Care.

2. Infancy:

- o The Neonate up to 4 weeks - Physical, Physiological, Cognitive, Perceptual and Social Capabilities.

- o 4 weeks up to 2 years: Physical & Motor, Social, Emotional, Social, Language and Cognitive Development.

3. Early Childhood Years

- o Developmental Milestones/Tasks
- o Physical and Motor Development, Emotional and Social development, Cognitive and Language Development of children in Early Childhood Years.

4. Middle Childhood Years

- o Developmental Milestones/Tasks
- o Physical and Motor Development, Emotional and Social development, Cognitive and Language and Moral Development of children in Middle Childhood Years.

5. Late childhood Years

- o Developmental Milestones/Tasks
- o Physical and Motor Development, Emotional and Social development, Cognitive and Language Development of children in Late Childhood Years.

References

- Stewart, Clarke, A., Friedman, S. (1987). Child Development: Infancy through Adolescence. John Wiley and Sons, New York.
- Santrock, J. W. (1983). Life Span Development. Wm. C. Brown Publishers, Dubuque, Iowa.
- Freiberg, K. L. (1992). Human Development: A Life Span Approach. Jones and Bartlet Publishers, London.

HDF 104 - Statistics

1. Meaning and Scope of Statistics.
2. Classification and Tabulation
3. Graphic and Diagrammatic representation of data (frequency, histogram, graphs, bar-Diagram and pie-charts).
4. Measure of Central tendency and Dispersion (Mean, Median, Mode, Quartiles, Range and Standard Deviation).
5. Correlation and Regression: Correlation and its interpretation. Product Moment and Rank order Correlation Coefficient Regression Equations (without derivation) and its interpretations, use for prediction.
6. Elementary ideas on probability (Simple Probability) Skewness and Kurtosis definition). Elementary ideas of random variable and its density function (Binomial, poison, Uniform Normal varieties, Normal Distribution and its properties, Use of Normal Probability Tables).
7. Elements of Testing a Statistical Hypothesis – Formulation of the problem, Definition of type I and II errors. Level of Significance, t-test, Z-test.
8. Design of Experiments: Analysis of Variance.
9. Non-Parametric Inference: Sign, Mann-Whitney and χ^2 test (as goodness of fit and independence of attributes in 2x2 and r x c contingency tables).
10. Use of computer of statistical analysis using, SPSS.

References

- Simpson & Kafka : Basic statistics (Oxford & I.B.H. Publishers)
- Faro Yammne: Sampling Theory

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- Goon, Gupta, Das: Fundamentals of Statistics Vol. I and II Gupta.
- Snedecor & Cochran : Statistical Methods (Oxford and I.B.H. Publishers).
- Shukla M.C. & Gulshan S.S.: Statistics, Theory and Practise (Sultan Chand & Co.)
- Gupta S.P.: Statistical Methods (Soltan Chand & Co.).
- Good C.V. and Carter D.E. : Methods of Research – Educational Psychological, Sociological Application (Century Craft, New York – 1954)
- Kerlinger FA. : Foundations of Behavioural Research (Century Craft, New York, 1966).
- Yound P.V. & Schind C.G.: Scientific Social Survey and Research (Prentice Hall, New Delhi - 1968).
- Philips B.S.: Social Research, Strategy and Tactics.
- Mussen Paul: Hand Book of research Methods in Child Development
- Devdas R.P. &: Hand Book of Research Methodology Kulandaivel (Sri Ram Krishna Mission Vidyalaya 1971).

HDF 105 - Early Childhood Care and Education (ECCE)

1. Need and importance of early years childhood care and education (ECCE).
2. Goals of ECCE : Theoretical and empirical perspectives.
3. Significance of early stimulation and learning for School Readiness.
4. Effective Teaching and Learning Strategies in ECCE. Different Curriculum models in ECCE.
5. Developmentally appropriate curriculum/programme (DAC/DAP) and Program planning. Principles of planning, long and short term planning, small group and large group planning; Selection of activities and teachers' role to facilitate learning of different concepts such as language, Rhythm, , Mathematics, Science, 3R's, Sensory experiences.
6. Organizational Set Up: Preschool building, site and location, plans for various types, learning centres, space allotment for Indoor and outdoor play.
 - a) Criteria of selection of Preschool staff and their qualifications
 - b) Characteristics of a quality ECCE Program
- 7 Planning of developmentally appropriate ECCE activities: Goals, significance, objectives, criteria.
- 8 Safety education and issues in care of children
- 9 Records and Registers: Values, types and maintenance
- 10 Report Writing and Evaluation of Children and ECCE programs.

References

- Kaul, V. (2002) Early Childhood care and education. In Govinda R. (Ed.) India Education Report: A profile of Basic Education (23-24) National Institute of Educational Planning and Administration: Oxford University Press.
- Sharma, M., A. (1993) Current Issues in Early Childhood care and Education. In T.S. Saraswati and B. Kaul (Eds.) Human Development and family studies in India: An Agenda for Research and Policy. New Delhi: Sage.
- Cleghorn, A. and Prochner, L. (2003) contrasting visions of early childhood education.

- Raut, S. Vyas, R. Sigh, A and Tiwari, J. (2006) Art Education: Teacher's Handbook for Classes VII and VIII New Delhi: NCERT.
- Anandlakshmy, S. (1989) Creches in Delhi. Lady Irwin College, University of Delhi.
- David, T. (1999) Teaching young children New Delhi: Sage.
- Swaminathan, M. (ed.) (1998). The first five years: A critical perspective on early childhood care education in India. New Delhi: Sage.

HDF 111- Life Span Development -1

1. Observation of Neonatal Reflexes
2. Anthropometric Measurement and Assessment of Children in Different Age Groups and Settings: Plotting and interpretation of Growth Charts.
3. Assessment of various Developments of Infants.
4. Identification of Childhood Health and Developmental Problems.
5. Preparation of Observational Check List to Assess Physical, Motor, Social, Language, Emotional and Cognitive Developmental Tasks.
6. In -depth Case Study of a Selected Child.

References

- Stewart, Clarke, A., Friedman, S. (1987). Child Development: Infancy through Adolescence. John Wiley and Sons, New York
- Santrock, J. W. (1983). Life Span Development. Wm. C. Brown Publishers, Dubuque, Iowa.
- Freiberg, K. L. (1992). Human Development: A Life Span Approach. Jones and Bartlet Publishers, London..

HDF 112 - Early Childhood Care and Education

1. Visits to various centres of early childhood care and education (ECCE).
2. Planning Programme and activities for Children's all round Development: Preparing Teaching Aids
3. Arranging learning centres to facilitate learning of different concepts.
4. Placement and observation in different Early Childhood Education and Day Care Centres.
5. Organising Parent Teacher Meet, Celebration of festivals/functions, workshops and open house for parent involvement.
6. Planning of nutritional supplements for preschool children.

HDF 113 - Methods of Human Study

1. Needs and Importance of Human Study. Different Approaches to Human Study: Cross sectional approach, longitudinal approach, and sequential approach,
2. Methods of Human study: observation, survey, interview, questionnaire, experiment, case study, sociometry, and focus group discussion – Merits and Demerits.
3. Quantitative and Qualitative Approaches to Human Study.
4. Applications of Methods in Different Stages of Life.

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- 5. Critical Analysis of current Issues through FGD'S and Debate with up Focus on Child, Women and Elderly.

References

- Bhatnagar, G.L. (1990) Research methods and measurement in Behavioural & social services, Agri. coll publishing Academy, New Delhi.
- Banclarkar, P.L. and Wilkinson, T.S. (2000): Methodology and Techniques of social research, Himalaya Publishing House, Mumbai.
- Saraswathi, T .S. & Kaur, B. (1993): Human Development and family studies in India, New Delhi Sage Publication.
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- Hayes, N (ed.) (1997). Doing qualitative analysis in Psychology Hove: Psychology Press.
- Research methodology – Methods & Techniques – C.R. Koltein – Wishwas Prakashan, New Delhi.
- Koradia, K.; Narang, D. & Purohit, S. (2008) Methods of Human Study: Practical Manual, Shivam Book House Pvt. Ltd., Jaipur.
- Gupta M.L. & Sharma, D.D. (2008) S Purvey Methods in Social Investigation 4th ed. Sahitya Bhawan Publication, Agra.

HDF 114 - Play and Creativity

1. Meaning, Definition and Significance of Play and Creativity in Growth and Development of children.
2. Types of Play: Exploratory, Solitary, Parallel, Symbolic, Constructive, Dramatic/role play, Co – operative, Individual play, Group Play, Sports, Games.
3. Components of Creativity: Fantasy, Imagination, Giftedness, Fluency, Flexibility, Originality, Celebration and Curiosity.
4. Theories of Play and Creativity (one each)
5. Equipments and Materials Used for Promotion of Play and Creativity (Indigenous Play Materials).
6. Planning and Implementation of Play and Creative Activities with Children in Different Age Groups.
7. Preparation of Materials and Aids to Promote Play and Creatively.
8. Survey and Evaluation of Children's Literature and Play Materials.

HDF 201- Research Methodology

1. Research- Purpose and objectives
2. Research Design, Purpose of Research Design, Types of Research Design – Experimental and Descriptive
3. Definition and Identification of a Research Problem, Selection of problem, hypothesis, basis assumption and limitations of the problem.
4. Techniques of sampling – Census & Sampling methods, probability and non-probability sampling procedures, sample size.
5. Data gathering instruments, Measurements and scales, Reliability and validity of measuring instruments – Questionnaire, Schedule, Score Card, Checklist.

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6. Methods of collecting data: Questionnaire, interview technique, observations, case study, focus group discussion, In depth interview.
7. Planning, Executing and Analysis of Large scale surveys with special emphasis on surveys in Home Science.
8. Presentation and preparation of report for dissertation publication.
9. Review of literature: Importance, sources and writing review of literature.
10. Bibliography: Importance of method of writing references of books, Journals, proceedings and websites.

References

- Simpson & Kafka : Basic statistics (Oxford & I.B.H. Publishers)
- Taro Yammne : Sampling Theory
- Goon, Gupta, Das : Fundamentals of Statistics Vol. I and II. Gupta
- Snedecor & Cochran : Statistical Methods (Oxford and I.B.H. Publishers)
- Shukla M.C. & Gulshan S.S. : Statistics, Theory and Practise (Sultan Chand & Co.)
- Gupta S.P. : Statistical Methods (Soltan Chand & Co.).
- Good C.V. and Carter D.E. : Methods of Research – Educational Psychological Application (Century Craft, New York 1954).
- Kerlinger F.A. : Foundations of Behavioral Research (Century Craft, New York, 1966).
- Yound P.v. & Schind C G : Scientific Social Survey and Research (Prentice Hall, New Delhi – 1968).
- Philips B.S. : Social Research, Strategy and Tactics
- Mussen Paul : Hand Book of Research Methods in Child Development.
- Devdas R.P. & : Hand Book of Research Methodology Kulandaivel (Sri Ram Krishna Mission Vidyalaya 1971)

HDF 202- History and Theories of Human Development – 2

Principles, basic concepts, critique, implications and comparative analysis of the following theories:

1. Cognitive theories of Jean Piaget and Bruner
2. Learning Theories with reference to Pavlov, Watson, Skinner, Harlow, Bandura and Sears.
3. Field theory of Lewin
4. Gardner’s theory of Multiple intelligence
5. Ecological Theory by Bronfenbrenner
6. Vygotsky’s socio-cultural perceptive
7. Chomsky’s theory of language
8. Kohlberg’s theory of Moral Judgement

References

- Hetherington, E.M. and Parke R.D. (1986). Child Psychology- a Contemporary viewpoint (3rd ed.) New York: McGraw Hill Book Company
- Baldwin, A.L. (1980). Theories of child development (2nd Ed.) New York: John Wiley & Sons.
- Shaffer, D.R. (1993). Development Psychology: Childhood and Adolescence (3rd Ed.) California: Brooks/Cole Company

- Santrock, J.W. (1996). Child development (7th Ed.) USA: Brown & Benchmark.
- Vasta, R; Haith, M.M. & Miller, S.A. (1992) Child Psychology- The Modern Science New York: John Wiley & Sons.

HDF 203 - Early Childhood Care & Education

1. Focus of ECCE in five years plans.
2. Organisation, Management, Planning and execution of Developmentally Appropriate Activities for Infants and preschoolers in:
 - a) Crèches and Day-care
 - b) Preschools and Anganwadis.
3. Home School Relationship: Need and importance of Involvement of parents/grandparents in ECCE centres: Techniques of parent education.
4. Disciplining children: Tips for teachers and parents to introduce positive discipline. Behaviour Modification Strategies for young children.
5. Role of special educators in ECCE centres to facilitate inclusive education.
6. Evaluation, Types and Techniques for Children's Programme.

References

- Ainsworth, F. and Fulcher, L.C. (Ed.) (1981). Group care for children. London and New York: Tavistock Publication.
- Topping, K.J. (1986). Parents as educators' training Parents as Educators – Training Parents to teacher their children. London & Sydney: Croomhelm.
- Turner, J. (1980) made for life-coping, Competence and cognition. London and New York: METHUEN
- Kostelink, M.JU. Soderman, A.K. and Whiren, A.P. Developmentally Appropriate Curriculum-Best Practices in Early Childhood Education: merrill and imprint of practice Hall
- .Grewal, J.S. (1984) Early Childhood Education – Foundation and Practice Agra: National psychological Corporation.
- Narang, D. Purohit S. and Karodia, K. (2008) – Early Childhood care and Development – Practical Manual Jaipur : Shivam Book House Pvt. Ltd.

HDF 204 - Philosophies, Ideologies and Approaches of ECCE

1. Historical perspectives of ECCE in the West and in India.
2. Philosophies and contributions of **Western Thinkers and Educators:**
 - Plato
 - Commonius
 - Rousseau
 - Mcmillan Sisters
 - Froebel
 - John Dewey
 - Maria Montessori
3. Philosophies and contributions of **Indian thinkers and educators:**
 - M.K. Gandhi

- Rabindranath Tagore
- Annie Besant
- Gijubhai Badheka
- Tarabai Modak and Anutai Wagh

4. Types of ECCE programmes

- Head start
- Balwadi
- ICDS /Anganwadi
- Nursery school
- Day care centre and crèches

HDF 205- Adolescence: Development and Challenges

1. Period of Storm and Stress; Physical changes, Hormonal and Physiological changes, Growth spurt, Individual Differences and Early versus Late Maturation. Reproductive and Sexual Development.
2. Social Development of Adolescents, Significance of Peers and Family; Heterosexual Attractions, Homosexuality, Parent – Child relationships and Discipline/freedom.
3. Understanding Adolescents' Emotional, Cognitive and Moral Development.
4. Adolescence: Erikson and Maria's model.
5. Significant Issues in Adolescence: Rebellion and Conflict with Home and School Authorities, Delinquency and Psycho – emotional Problem; Educational and career Choices and Co – curricular Interests.

HDF 206 - Life Span Development – 2; Adulthood and Aging

1. Early Adulthood:

- Understanding developmental tasks of early adulthood (18-40 years)
- Period of Youth (18-25 years) and its challenges
- Choices in career and marriage
- Interpersonal and Intrapersonal adjustments
- Preparation for Parenthood and child rearing, roles and responsibility
- Significant issues in adulthood: Live-in-relationship, Being single, Divorce, Remarriage, Gay marriage, DINKS, Adoption and single parent adoption.

2. Middle Adulthood/Middle age

- Challenges, adjustments and developmental tasks of middle adulthood (40-60 years)
- Onset of climacteric changes: Menopause and Andropause, mid life crises
- Adjustment and management of health needs, increasing status and pressure in work and career;
- Familial stage of "empty nest"
- Social responsibilities and leisure time activities.
- Preparation of settlement of children and retirement.

3. Late Adulthood and Aging:

YMG

- Challenges and adjustment during late adulthood and aging (60-onwards).
- Declining physical/motor, memory and sensory capacities.
- Adjustment with changes in familial situation, losing of life partner or significant others and facing grief and loss;
- Financial adjustment, organizing social life and activities.
- Factors to "successful aging".

References

- Santrock, J. W. (1983). *Life Span Development*. Wm. C. Brown Publishers, Dubuque, Iowa.
- Freiberg, K. L. (1992). *Human Development: A Life Span Approach*. Jones and Bartlet Publishers, London.
- Kaluger, G. (1986). *Human Development: The Span of Life*. Macmillan Publishing Company, New York.

HDF 211- Computer Application

1. Introduction

- Classification of computers, computer memory,
- Types of Software: Application and system software, operating system and types: Single user, multiuser
- Application of computers for research

2. Data communication and networks

- Data communication concept
- Internet, web-e-mails
- Search engines – Enterprises : e-communication and e-collaboration

3. MS Office and its application

- File handling in windows
- Various version of MS Office
- MS Word : Text formatting
- MS Excel : Features, various formula and function
- MS PowerPoint: creating presentation and adding effects.

4. SPSS

- Introduction to SPSS: definition, objectives and features
- Data analysis using SPSS: data entry, creating variable, switching to data labels.
- Data analysis: frequencies, recording into different variable, cross tabulation and layers

References

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- Computer fundamental – Sinha and Sinha, BPB Publications
- Introduction to Compute Norton, TAT McGraw Hill.
- Computer Fundamental and introduction to IBM – PC Dr. Pankaj Nagar, Manish Soni, Ramesh Book Depot.
- An Introduction to data base system – Desai, Galgotia publication
- Computer network – taneubaum, person
- An introduction to data base system – Kannan/Swamyathan, Person.
- Fundamentals of computers – V. Rajaram. Prentice Hall.

HDF 212 - Measurement, Assessment and Evaluation of Psychological Testing

1. Definition of Measurement, Assessment and Evaluation.
2. Uses of psychological testing and tools.
3. Common statistical notations and definitions – constant, variable, population, sample, parameter, etc.
4. Levels of measurement – Nominal, ordinal, interval and ratio
5. Various statistical tools for analysis of data-
 - Mean
 - Standard deviation
 - Correlation – (Pearson product – moment correlation coefficient, Spearman rank-order correlation coefficient, phi coefficient, tetrachoric correlation, point biserial correlation coefficient).
6. Format of instrument-checklist, pair comparison, summated ratings, semantic differential, equal appearing interval, projective technique.
7. Steps to test construction and standardization.
 - Reliability-meaning, types-retest; parallel-form, internal consistency.
 - Validity-meaning, types-content, criterion, construct.
 - Norms.

References

- Agarwal, J.C.: Educational Research-An introduction, Arya Book Depot, New Delhi.
- Best, J.W.: Research in Education, Prentice Hall of India, New Delhi.
- Bhatnagar, G.L. (1990): Research Methods and measurements in behavioural and social sciences, Agri. Cole publishing Academy, New Delhi.
- Chandra, S.S. and Sharma, R.K.: Research in Education, Atlantics Publishers, New Delhi.
- Pareek, U. and Purohit, S. Training Instruments in HRD and OD, 3rd edition, Tata McGraw Hill, New Delhi.

HDF 213 - Life Span Development-2

1. Formulation of questionnaire to assess adolescent problem sand conflicts
2. Preparation of interview schedule for adults taking into account their developmental tasks.
3. Organising interactive session and focus group discussions on significant issues of adulthood.
4. Conversations and interviews with elderly to highlight their concerns, anxieties, adjustment and other problems. Planning and organising social activities with elderly.

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1. Organising field trips to various welfare organisations working for children (including children with developmental disabilities), women and elderly – Preparing a blue print.
2. Developing Performa/checklist to assess administration, management, infrastructure facilities and functioning of the institutions.
3. Critical analysis of any one welfare institution with specific reference to its management, goals, administrative policies, facilities available, program implementation, achievements and weaknesses.
4. Report writing: Preparing reports with suitable recommendations.

HDF 301 - Family Dynamics

1. Family- Definitions of family from different perspective, Approaches of Family – Biological, Historical, Sociological, Developmental, Structural and Functional. Current Family problems.
2. Kinship Groups and Systems, Types, Degrees Descent and Usage and its influence on Child's Development.
3. Society. Structure-Rural, Urban and Modern Society and its influences on the family. Social Stratification- Social Ranking and Social Class Difference.
4. Social Institutions: Family, Education, health and economic work and religion.
5. Meaning of Socialization
6. Culture – Definition & Importance of Culture, Components of Culture, Culture change and Diversity, Advances- Culture and Technology, A Global Culture, Sociological Analysis of Culture.
7. Personality as a Social Phenomenon, Personality and Society, Their Inter Relationship, Major Factors Affecting Personality
8. Impact of deprivation on the child.

HDF 302 - Children with Developmental Disabilities

- Meaning and definition of developmental disabilities, various terminologies related to children with developmental abilities.
- Classification and approaches to identification, treatment and rehabilitation of children with developmental abilities.
- Definition, causes, assessment, treatment, education and rehabilitation of children with developmental disabilities-
 - Sensory deficits – visual impairment, auditory impairment
 - Mentally challenged / intellectual impairment
 - Orthopaedic disabilities
 - Communication disorders
 - Autism spectrum disorders

Learning disabilities

Inclusive, integrated and special schools

- Rights, programs, policies and acts of children with developmental abilities.

REFERENCES

- Bootzin R. R. (1993) Abnormal psychology Current perspectives (with ed.)Mcgraw hill Inc. New York
- Dunn, L.M. (ed.). "Exceptional children in this school", Holt Rinehart and Winston, 1963.
- Man, psychology, Houghton Mifflin Company Boston, 1951. New Delhi 16.
- Gedkar, E. Disabled in India, Somariya, 1983.
- Kirk, S.A. Education "Exceptional Children", Hungton, Niffhin, 1962.

HDF 303 - Rights, Laws and Polices for Children, Women and Adults

1. Human Rights Perspective- Child rights with Special Focus on Girl Child; Women Rights; Role of United Nations Child Rights Committee.

2. Laws and Legislative Rights Pertaining to Women:

- Hindu Marriage Act
- Dowry Prohibition Act
- Hindu Succession Act
- Child Adoption Act
- Juvenile justice Act
- Right to Education Act 2009
- Other relevant laws related to women and children.

3. Welfare Programmes and Policies related to Children and Adults.

4. Welfare Programmes and concerned Issues in South Asian Countries, with focus on India.

Reference

- Diwan, Paras, Diwan Peeyushi (2000). Women and Legal Protection. Deep and Deep Publication, New Delhi.
- Agosin, M. (2003). Women Gender and Human Rights. Rawat Publication, New Delhi.
- Bajpai, A. (2003). Child Rights n India: Law, Policies and Practices. Oxford University Press, New Delhi.
- Kumar, R. (2000). Women and Marriage. Anmol Publications Pvt. LTD: New Delhi.
- Danda, A. In Gendering Law. Eastern Bok Company, New Delhi.
- Rao, M. Law Relating To Women and Children. New Delhi.
- Jaiswal, J. J. V.: Legal Aspect of Pregnancy, Delivery and Abortion.

HDF 304 - Guidance and Counselling

1. Meaning, aims, scope and principles of guidance and counselling
2. Techniques of counselling – Directive, non-directive, eclectic, individual and group

- 3. Types of guidance and counselling – Individual, group, personal, Social (marriage and family), vocational
- 4. Counselling therapies – Reality, rational – emotive, cognitive- behaviour, group, activity, play therapy, psycho-drama, transactional analysis, remedial and corrective measures.
 - Competencies/Characteristics of a counsellor
 - Professional
 - Academic
 - Personal
- 5. Essentials of conducting guidance and counselling sessions-
 - Understanding the process
 - Knowledge and skills to handle the tools and techniques
 - Effective communication skills
- 6. Recording and interpretation of a counslee from a holistic perspective

Reference

- Brammer, L.M. (1985). The helping relationships: Process & skills. New Jersey: Prentice-Hall.
- Hackney, H. & Cormier, L.S. (1979). Counselling strategies and objectives. New Jersey: Prentice Hall.
- Thornburg, H.E. (1975). Contemporary Adolescence: Readings, Belmont: Wadsworth.
- Hetherington, E.M. & Parke, R.D. (1979). Child psychology: A contemporary viewpoint. N.Y. : McGraw – Hill

HDF 311 - Guidance and Counselling

- 1. Visit to psychological counselling cell Writing and compiling articles on various aspects of guidance and counselling.
- 2. Need assessment of individual guidance and counselling by suitable tool.
- 3. Planning and organizing guidance and counselling sessions for different age groups.
- 4. Developing basic skills of educational and career development through workshops and placements.
- 5. Orientation to various therapies- play therapy, psychotherapy, family therapy.
- 6. Case profile of an individual

HDF 312 - Placements in Special Agencies

Students are required to be placed in an agency for a full semester.

- 1. Students will observe, learn and participate in a selected agency.
- 2. They will plan and implement activities with children as per their needs.
- 3. Students will require evaluating the working of the agency; highlighting strengths and weakness; making recommendations.
- 4. Submission of a report.

HDF 321 - Dissertation

Each student will be given a topic and thesis has to be prepared as per guidelines.

HDF 323 - SCIENTIFIC WRITING

Objectives

1. To be able to appreciate and understand the importance of writing scientifically.
2. To develop competence in writing and abstracting skills for different writing needs.
3. To develop the writing ability and to review different types of scientific writing.

Course Content: Theory

Unit 1: Scientific writing as a means of communication and preparing for writing

1. **Different forms of scientific writing:** Articles in journals, research notes and reports, review articles, monographs, dissertation, bibliographies.
2. How to formulate outlines: The reasons for preparing outlines, kinds of outlines e.g., Topic outlines, Conceptual outlines, theme outline.
3. Filling in the outlines and preparing the framework, e.g., drafting titles and subtitles.
4. Tables and illustrations and systematic means of presenting data.
 - a. Titles, rows, columns, footnotes
 - b. Types of illustrations: **graphs**, diagrams, flow charts

Unit 2: The writing process and styles of writing

1. Use of outlines as a starting device
2. Making of draft – improving the draft in relation to the objectives
3. Various styles of writing, consistency and other aspects
4. Types of scientific writing – reports, journal papers, abstracts, monographs, dissertation, funding etc.
5. Components of scientific writing – Introduction, Review of Literature
 - a. Methodology, Results and discussion, summary and conclusion
 - b. Limitations, bibliography and appendices
6. Writing a research proposal for grants – justification, rationale and importance of the question being addressed, empirical and theoretical conceptualization, presenting pilot study/data, research proposal and time frame, clarity, specificity of method, clear organization, outcome of the study and its implications, budgeting, available infrastructure and resources, executive summary etc.

References

1. APA (1984): Publication manual of American Psychological Association, 3rd Edition, Washington, APA.
2. Cooper. HM. (1990): Integrating Research: A guide for literature Reviews, 2nd Edition, California, Sage.
3. Dunn FV and others. Eds (1994). Disseminating Research: Changing profile, NY, Sage

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HDF 401 - Administration & Management of Welfare Agencies

1. Health, nutrition and educational status of children in India with specific reference to girl child and rights of children.
2. Changing philosophies of welfare programs in India in five year plans.
3. Existing Government organisation looking for welfare of children and women in India – ICCW, CSWB, NIPCCD, NCERT, TNEP, EPAI, ICSW, CHEB, CRY, Helpage India.
4. Welfare programmes in India – ICDS, SOS village, Chetana, Orphanages, Balhawan society.
5. International organisation – UNICEF, WHO, CARE, DANIDA, World Bank, CASA.
6. NGO – Bodh, I- India, Diganter, Vatsalya, Mother Teresa homes and other existing non governmental organisations.

References .

- Koradia, K.: Narang, D. & Vaishnav, R. (2010) Status of Child and Welfare Organisations, Avishkar Publishers and Distributors, Jaipur.
- Barr, A.S., Burton, W.H. & Brenckner. L.J. "Supervision" D. Appleton – Century Company, New York, 1938.

Periodicals

- Social Welfare – CSWB.
- The Journal of the welfare- family planning, Association of India.
- The Indian Journal of Social work- Tata Institute of Social Sciences.

HDF 402 - Developmental Psychopathology

- Meaning, definition and terms used for psychopathological disorders.
- Identification, diagnosis and assessment of children with psychopathological disorders.
- Childhood and adolescence psychiatric disorders-conduct disorders, ADHD.
- Mood disorder-depression, bipolar disorder.
- Neurotic and psychotic disorders-phobia, obsessive compulsive disorder, schizophrenia, paranoia, hysteria.
- Approaches to treatment – psychodynamic, behavioural, cognitive, medical, electroconvulsive, psychosurgery, yoga, meditation, hypnosis, institutional care.
- Dealing with individuals and groups – psychotherapy, , psychodrama, transactional analysis, behaviour modification.

References

- Shanangam, T.K. Abnormal Psychology. Tsst, McGraw-Hill, 1981.
- Indian Journal of psychiatry, The Indian Psychiatric Society.

- Mehe, J. Abnormal Psychology Holt, Rinehart, 1983.
- Gallatton, Abnormal Psychology, Collien MacMillan, 1982.
- Davision, G.C., et al. Abnormal Psychology, John Wiley, N.Y.
- Gau, lask, B. (1985) Overcoming behaviour problems in Children: A practical guide. New York: Area Publishing Inc.

HDF 403 - Cross Cultural Perspectives in Family Studies

1. Introduction and Overview: Theoretical and Methodological Issues in Cross-Cultural Psychology: What, why and how of cross-cultural psychology. Cultural – psychology and psychological anthropology, Meaning of culture, Relevance of Psychology and cross-cultural theory and Research in Western and non-western countries. Cross-cultural research methods with emphasis on conceptual, linguistic, Stimuli, Functional and metric equivalence, and the role of replication in cross-cultural studies.
2. Selected Topics in Cross-cultural Research: Various psychological processes and phenomena across cultures, Examples have included attribution; individualism and collectivism; expression, recognition and phenomenology of emotion; perception and optical illusion; gender roles: psychopathology: altered states of consciousness and mental health; intelligence; moral reasoning; modernization.
3. Application in Cross-cultural Research: Applied aspects of cross-cultural research. Diagnosis and treatment of mental disorders across cultures; the development of educational programs, cross-cultural communication; cross-cultural management; training programs for cross-cultural transitions.

Course Format and Assessment

- Informal seminar, student involvement and participation in form of seminars, films and various exercises form important components of the course.

References

- Berry. J.W., Poortinga, Y.H., Pandey J. Dasen, P., Saraswathi, T.S., Segall, M., & Kagitcabasi, C. (1996). Handbook of cross-cultural psychology Vol. 1-3(2nd ed.). Boston: Allyn & Bacon.
- Berry, J.W., Poortinga, Y.H., Segall, M., Dasen, P.R., (1992). Cross-cultural psychology. Cambridge University Press.
- Bodn, M.H., (Ed.) (1988). The cross-cultural challenge to social psychology. Newbury PK, CA: Sage.
- Bond, M.H. (Ed.) (1986). The psychology of the Chinese people. Hong Kong: Oxford University Press.
- Bond., M.H. (Ed.) (1996). The handbook of the Chinese psychology. Hong Kong: Oxford University Press.
- Brislin, R (Ed.) (1990). Applied cross-cultural psychology, Newbury Pk. CA : Sage.
- Lonner, W., & Berry, J.W. (Eds.). (1986). Field methods in cross-cultural research. Newbury Park, CA: Sage.

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Moghaddam, F., Taylor, D & Wright. S. (1993). Social psychology in cross-cultural perspective. New York: W.H. Freeman.

- Smith, P.B., Bond, M.H. (1993). Social psychology across cultures. New York: Harvester Wheatsheaf.
- Triandis, H.C. (1994). Culture and Social behaviour. New York: McGraw Hill.
- Triandis, H.C., et al (Eds.) (1980). Handbook of cross-cultural psychology (Vol. 1-6). Boston: Allyn & Bacon.

Journals

- Cross-cultural Research
- Culture and Psychology
- Journal of Cross-cultural Psychology
- Journal of Social Psychology
- International Journal of Behavioral Development
- International Journal of Intercultural Relations
- International Journal of Psychology

HDF 411 - Emerging Issues in Human Development

1. Situation of Child labour in India. Children working in factories, homes and on streets. Definition, status and problems. Child abuse.
2. Women and violence, types of violence, sexual harassment at work place. Domestic Violence marital violence. Empowerment of women.
3. Adulthood: Live – in – relationship, being single, divorce, remarriage, gay marriage, DINKS, adoption and single parent adoption.
4. Gender violence – dowry, harassment and deaths, suicides, commercial and religious prostitution, sexual harassment and exploitation, foeticide, infanticide, eve teasing.

References

- Berk, L.E. (1989) Child development Allyn and Bacon Ltd., London.
- Sarasati, T.S., & Kaur, B. (1993) Human Development and Family Studies in India, Sage Publication, New Delhi.
- Students are required to refer latest literature on human issues, magazines and websites.

HDF 411 - Education and Training of Children with disabilities

1. Visit to various institutions for disabled children
2. Case profile of disabled children (5) –presentation and report writing
3. Identification and assessment of disabled children
4. Planning activities and suitable aids for disabled children
5. Collecting articles on disabled children
6. Interviewing parents and teachers of children with disabilities

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HDF 412 - Working with Families in Communities

1. Observation of families in different socio-economic groups.
2. Survey of child rearing practices disciplinary, practices in rural/slums and urban (both disadvantaged and middle & upper classes) settings.
3. Study daily routines & play activities of children in three socioeconomic groups.
4. Working with communities for promoting education, health, hygiene, gender-equality, child and human rights, knowledge regarding HIV aids and income generation activities.

HDF 421 - Dissertation

Each student will be given a topic and thesis has to be prepared as per guidelines.

HDF - 422 Seminars

HDF423 - SCIENTIFIC WRITING

1. Several exercises will be conducted to train the students to develop writing skills in preparing outlines of technical reports, scientific paper, scientific abstracts, Review article, Research notes, Monographs, Dissertation, and Bibliographies.
2. Submitting a research proposal.
3. Use of computer graphics to support scientific writing

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