## Semester IV

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Title of the Course/ Course No.</th>
<th>Hours/Week</th>
<th>Marks</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Advanced Nutrition HSC15401CR</td>
<td>4 0 0</td>
<td>100</td>
<td>4+0+0=4</td>
</tr>
<tr>
<td>2</td>
<td>Food Processing &amp; Technology HSC15402CR</td>
<td>4 0 0</td>
<td>100</td>
<td>4+0+0=4</td>
</tr>
<tr>
<td>3</td>
<td>Food Processing &amp; Technology (Lab Course)/Dissertation HSC15403CR</td>
<td>0 4 4</td>
<td>100</td>
<td>0+2+2=4</td>
</tr>
<tr>
<td>4</td>
<td>Nutrition in Critical Care HSC15404CR</td>
<td>4 0 0</td>
<td>100</td>
<td>4+0+0=4</td>
</tr>
<tr>
<td>5</td>
<td>Internship/Dissertation HSC15405CR</td>
<td>0 8 0</td>
<td>100</td>
<td>0+4+0=4</td>
</tr>
<tr>
<td>6</td>
<td>Gender and Development HSC15406CR</td>
<td>4 0 0</td>
<td>100</td>
<td>4+0+0=4</td>
</tr>
<tr>
<td>7</td>
<td>Training and Development HSC15407CR</td>
<td>4 0 0</td>
<td>100</td>
<td>4+0+0=4</td>
</tr>
<tr>
<td>8</td>
<td>Gender and Development (Lab Course)/Dissertation HSC15408CR</td>
<td>0 4 4</td>
<td>100</td>
<td>0+2+2=4</td>
</tr>
<tr>
<td>9</td>
<td>Development of Creativity HSC15409CR</td>
<td>4 0 0</td>
<td>100</td>
<td>4+0+0=4</td>
</tr>
<tr>
<td>10</td>
<td>Principles of Guidance &amp; Counselling HSC15410CR</td>
<td>4 0 0</td>
<td>100</td>
<td>4+0+0=4</td>
</tr>
<tr>
<td>11</td>
<td>Principles of Guidance &amp; Counselling (Lab Course)/Dissertation HSC15411CR</td>
<td>0 4 4</td>
<td>100</td>
<td>0+2+2=4</td>
</tr>
<tr>
<td></td>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>ECTS</td>
</tr>
<tr>
<td>---</td>
<td>-------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>12</td>
<td>HSC15412DCE</td>
<td>Current &amp; Emerging Concepts in Human Nutrition</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>HSC15413DCE</td>
<td>Food Safety &amp; Quality Control</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>HSC15414DCE</td>
<td>Project Management and Women Entrepreneurship</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>HSC15415DCE</td>
<td>Parenting In Early Childhood</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>HSC15416GE</td>
<td>Participatory Tools and Methods</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>HSC15417GE</td>
<td>Introduction to Guidance and Counselling</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>18</td>
<td>HSC15418OE</td>
<td>Introduction to Disabilities</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

**Note:** Course Code HSC15401CR is common for both specializations of Food Science & Nutrition/Dietetics & Clinical Nutrition
ADVANCED NUTRITION

Code: HSC15401CR

Credits: L 4

Periods/week: 4 Hours

M.M: 100

Objectives:

To enable the students to:

1. Gain knowledge regarding recent advances in Micro and Macro elements, Fat soluble and Water soluble Vitamins.
2. Study various methods of measuring body composition
3. Develop the desire to undertake research.

Contents:

Unit I:

- **Body composition**: Importance, components, Methods of measuring body composition. Wang’s five level model of body composition.
- **Carbohydrates**: Metabolic Utilization of Carbohydrates, Regulation of Blood Glucose Concentration.
Unit II:

- **Proteins**: Metabolism, Nitrogen Balance. Quality of Proteins. Methods used for evaluating protein quality (amino acid score, PER, BV, NPU).

- **Lipids**: Fatty Acids and Essential Fatty Acid deficiency.

- **Water and electrolytes**:
  - Sodium, Potassium, Chloride: Their Absorption, Excretion and Functions.
  - Acid-Base Balance

Unit III:

- **Macro Elements**:

  - **Calcium**: Metabolism, Absorption and factors affecting it
  - Calcium Balance and factors contributing to balance.

  - **Phosphorous, Magnesium, Sulphur**: Functions, deficiency and toxicity.

- **Micro Elements**:

  - **Iron**: Absorption, Transport, Storage, Excretion, Functions, Deficiency and Toxicity.
  - **Copper, Iodine, Manganese, Molybdenium, Zinc, Selenium, Flourine**: Functions and Deficiency.

Unit IV: Vitamins.

- **Fat Soluble vitamins**:

  - **Vitamin A**: Metabolism, functions sources and deficiency.
  - **Vitamin D**: Metabolism, functions sources and deficiency.
  - **Vitamin E & K**: Metabolism, functions sources and deficiency.
Water Soluble Vitamins:

- Thiamine: Metabolism, functions, sources and deficiency.
- Riboflavin: Metabolism, functions, sources, and deficiency.
- Ascorbic Acid: Metabolism, functions, sources and deficiency.
- Other water soluble vitamins.

References:

5. Indian Council of Medical Research. Recommended Dietary Intakes for Indian Latest Recommendation.

Journals

1. Nutrition Review
3. American Journal of Clinical Nutrition
OBJECTIVES:
1. Impart systematic knowledge of basic and applied aspects of food processing and technology.
2. Provide the necessary knowledge of basic principles and procedures in the production of important food products.
3. Orient the students to potential use of various by-products of food industry.

CONTENTS:

Unit I: Principles in Food Processing Operations – thermal, refrigeration, freezing and dehydration.

- **Thermal processing:** Degree of processing or preservation, selecting heat treatments, heat resistance of microorganisms, nature of heat transfer, protective effects of food constituents & types of thermal treatments.
- **Refrigeration:** Refrigeration, cool storage and shelf life extension; cool storages with air circulation humidity, control and gas modification.
- **Freezing:** Changes during freezing, rate of freezing, choice for final temperature for frozen foods, freezing effects & freezing methods.
- **Dehydration:** Food dehydration, water activity and food safety/quality & methods of dehydration.
Unit II: Principles in Food Processing Operations, Ionizing Radiation, Chemical Preservation and Fermentation.

- **Ionizing radiation:** Forms of radiant energy, ionizing radiation’s, sources and properties, radiation units, radiation’s effects, limiting indirect effects, objectives and food irradiation, safety and quality of irradiated food, irradiation of various foods and comparison with other methods of preservation.

- **Chemical Preservation:** By sugar, salt, curing, smoke, acid and chemicals. Chemical changes in foods that affect texture, flavour, colour, nutritive value, during handling and processing.

- **Fermentation:** Benefits.

Unit III: Processing Technology of Foods and Nutritional Implications for Cereal and Pulses, Fruits and Vegetables.

Cereals and Pulses

- **Wheat grain:** Characteristics & products, wheat milling products.
- **Maize:** Varieties, milling
- **Barley:** Production and composition, milling and malting
- **Rice:** Production, structure, composition, parboiling, milling, cooking & nutritive value & rice products.
- **Pluses:** composition, processing, elimination of toxic factors, fermentation and germination.

Fruits and Vegetables

- **Fruits:** Structure, composition, changes during ripening and storage.
- **Fruit processing:** Citrus fruits, apple juices and grape juice. Canning of fruits.
- **Fruit based beverages and concentrates:** Ketchups, sauces, squashes, jams, jellies and marmalades.
- **Vegetables:** Structure, composition, harvesting, post harvest practices and processing of vegetables.
Unit IV: Processing Technology of Foods and Nutritional Implications for Milk and Milk Products, Meat, Fish and Eggs, Fats & Oils, Spices and Food Additives.

Milk and Milk Products.

- **Milk processing**: Clarification, separation, pasteurization, standardization & homogenization.
- **Milk products**: Fortified, skimmed & concentrate milks, cream, butter, cheese, cultured milk products, dehydrated milk products & ice creams.
- **Indigenous milk products**: khoa, paneer, curd, yoghurt, ghee, mallai & rabbri.

Meat, Fish and Egg, Fats and Oils, Spices and Food Additives.

- **Meat**: Ageing, tenderizing, curing, smoking, freezing, and storage of meat.
- **Fish**: Preservation and processing, (freezing, canning, inspection and grading).
- **Egg**: Frozen, storage and dehydrated egg powder.
- **Fats and oils**: Processing
- **Major spices of India**: Processing, composition and uses.
- **Food Additives**: Definition, need broad classification.

References:

27. Kallia Manoranjan, Sood Sangeeta, food preservation and processing, Kaliyani Publishers.
29. Shakuntala Manay, Shadaksharaswami, M. Food Facts and Principles, New Age International Private Limited
FOOD PROCESSING AND TECHNOLOGY (LAB COURSE)

/DISSERTATION

PRACTICAL (P2)

Code: HSC15403CR
Credits: P2
Periods/week: 4 Hours
M.M(Pract) 50

1. Thermal processing - canning and bottling of fruits and vegetables.
2. Freezing of meat to study the effect on acceptability and nutritive value. (Restricted to Protein)
3. Dehydration and sun drying of one seasonal fruit and comparison of acceptability and nutritive value of fresh and dehydrated products. (Restricted to Vitamin-C & Sugar)
4. Dehydration and sun drying of one seasonal vegetable and comparison of acceptability and nutritive value of fresh and dehydrated products. (Restricted to Vitamin-C & Sugar)
5. Re-hydration of dried vegetables and observing effects of preservation on acceptability.
6. Preparation and preservation of fruit squash.
7. Preparation and preservation of jam and jelly of one seasonal fruit.
8. Preparation and preservation of pickle.
9. Preparation and preservation of tomato ketchup and tomato sauce.
10. Compare the cost of products made in the lab with those of commercial products of similar quality.

11. Preservation of different food by using different preservatives (Salt, sugar, vinegar, sulphur and dioxide).

12. Procuring a list of food processing units in government and private sector. (Urban/Rural)

13. Visit to a food processing unit and submitting a report.

**DISSERTATION (T2)**

- **Code:** HSC15403CR
- **Credits:** T2
- **Periods/week:** 4 Hours
- **M.M(Tutot)**: 50

- To undertake an independent piece of research work on an issue of contemporary concern that contributes to the advancement of knowledge in the field of Food Science and Nutrition/any other topic related to this field.

- The student will be guided and supervised by a member of the teaching faculty of the Institute. However, the dissertation in which the research culminates should reflect the student’s own work.
Objectives:

1. To understand the method of nutritional screening and nutritional assessment procedures.
2. To know about different methods of feeding for critically ill patients.
3. To know about the nutritional and special diet requirements in critical care.

Contents:

Unit I: Procedures of Nutritional Screening and Nutritional Status Assessment of the critically ill

Nutritional Screening

- Planning nutritional care
- Concept of screening, aims and objectives, explanation of the term screening, case finding and diagnostic tests.
- Uses, Types, Criteria of screening.

Nutritional Assessment

Unit II: Conventional feeding method of Nutritional Support for Critically ill Patients.

- Conventional feeding
- Purpose of modified diets.
- Types of diets - Routine diets, modified diets, test diet, quantitative and qualitative diets.
- Increasing nutrient intake.
- Adaptation for individual characteristics- vegetarianism, cultural factors.
- Summary of routine hospital diets.

Unit III: Tube, Parenteral and Transitional methods of nutritional support for critically ill patients

**Tube feeding:**
- Types, Characteristics of an ideal tube feeding.
- Nutritional related problem in the tube-fed patients.

**Parenteral Feeding:**
- Composition of solutions, estimating nutritional needs.
- Complications, cyclic parenteral nutrition
- Transitional feeding.

Unit IV: Nutritional Requirements and Special Diets in Critical Care.

- Stress, sepsis and burns.
- CV complications and surgery
- GIT tract surgery
- AIDS, Cancer
- Hepatic failure.
- Neuro surgery.
References:

1. Clinical Nutrition and Dietetics 2/c Frances J. Zeina
12. Frances, J. Zeman 2nd edition Clinical nutrition and dietetics
OBJECTIVE:

The internship programme shall be of 6 weeks duration. The interns are expected to have considerable theoretical knowledge and competencies related to the following aspects:

- Nutrition Screening and Assessment
- Dietary guidelines and practices
- Planning, nutrition care and intervention
- Implementing care plans
- Evaluating nutrition care
- Food Service Management
- Counseling
The internship is split up as follows:

- **A. Food Service: Administration**
  
  (Kitchen functioning, Stores, Accounting Practices, Purchasing, Food Preparation, Distribution, Service, Safety and Sanitation, Facility layout and Management).

- **B. Clinical Posting Renal Unit**
  
  Endocrinology
  
  Cardiovascular
  
  Surgical and Post Operative Unit
  
  Pediatrics
  
  Gastrointestinal Unit
  
  Private ward
  
  Outpatients ward (OPD) etc.

- **Nutrition and Diet Counseling:**
  
  Exposure to OPD Diet Clinic.
  
  Prescribing therapeutic diets to OPD patients.
  
  Prescribing therapeutic diets to discharged warded patients under the supervision of dietitian.

- **Research and Training:**
  
  Case study work
  
  Presentation of case study(s)
  
  Assignment
To undertake an independent piece of research work on an issue of contemporary concern that contributes to the advancement of knowledge in the field of Dietetics of Clinical Nutrition/any other topic related to this field.

The student will be guided and supervised by a member of the teaching faculty of the Institute. However, the dissertation in which the research culminates should reflect the student’s own work.
GENDER AND DEVELOPMENT

Code: HSC15406CR

Credits: L 4

Periods/Week: 4 Hours

M.M: 100

Objectives:

1. To understand the concept, need, relevance and dimensions of gender empowerment.
2. To get sensitized to gender disparities/imbalances and problems of women.
3. To know the efforts made at different levels for empowering women.
4. To know the support system in the country for women's development.

Contents:

Unit I: Gender and Development:

- Concept of gender, gender roles, changing trends, matrix shifts from welfare to development and empowerment, gender and development. National and International efforts for gender empowerment.
- Status of Women - Status, meaning, situational analysis, demographic education, employment, political and health- changing scenario.

Unit II: Violence against Women

- Dowry, divorce,
- Female foeticide and infanticide,
- Domestic violence, sexual harassment and exploitation
- Portrayal of women in mass media.
- Efforts for elimination of all forms of discrimination.

Unit III: Policies and programmes for women's development and support system

- National policy for empowerment of women, policy perspectives, mainstreaming, a gender perspective in the development process.
- Economic development - Poverty eradication, micro credit, self help groups, women and agriculture, women and industry and support services.
- Social empowerment - Education, health, nutrition, drinking water and sanitation, housing and shelter environment.

Unit IV: Legal Empowerment

- Legal literacy on personal and family laws, role of family court and legal aid centres.
- Political empowerment - Role of Panchayati Raj in the political empowerment of women.
References:

TRAINING AND DEVELOPMENT

Code: HSC15407CR
Credits: L 4
Periods/Week: 4 hrs
M.M: 100

Objectives:

1. To be aware of designing training programme for development.
2. To conceptualize the training process.
3. To provide experimental learning in training methodologies.
4. To evaluate sustainability of training programme.

Contents:

Unit I: Training and Learning

➢ Concept of learning, factors affecting learning among adults.
➢ Types and methods of learning, learning paradigms – learning knowledge, attitudes, skills practices, values, learning, reflective learning, literature learning.
➢ Concept of training: Goals of training, self-development, action learning, transformation and organizational development, enhancing organizational effectiveness, team spirit.

Unit II: Learning Methodologies.

➢ Current trends in training methodologies, organizational development approach, and competency based training, participatory training methodologies aspects, advantages,
limitations, and implication for training process.

- Training administration: policies, guidelines, authority --- the formation of training plans --- whom to be given training, when and how.

- Budget records, resourcing, use and choice of consultants.

**Unit III: Trainers and Trainee Interface.**

- Roles of a trainer, counsellor, partner, facilitators, teacher, advisor, model expert.
- Competencies of trainer attitudes, behavioural traits --- combining competencies of trainers, trainer -- trainee perceptions.
- Factors affecting, implications on training, building and developing assertive skills.
- Different phases of training, conceptual models of training
- System approach to training - inputs, process, outputs.
- Evaluation process — components, process, methods and techniques.

**Unit IV: Training Process, Organizational Factors and Training**

- Training Strategy and Designs - Training need assessment, Planning training and other resources programme, organizational environmental, training facilities and other resources.
- Arranging for strategies from training design. Training methods and interaction styles: classification of training methods, their importance, use and limitations — selecting appropriate methods to suit situations and circumstances. Case study, role play, psychodrama, sensitivity, buzz group discussion, transactional analysis, process work, micro—lab, business games etc.
- Cost, organizational support and other factors facilitating training, post training factors.
- Organizational factors and training. Working climate, leadership, values, mechanics of change - organizational structures for facilitating micro and macro level interventions for facilitating development.
References:


GENDER AND DEVELOPMENT/ DISSERTATION (LAB COURSE)

Practical (P2)

Code: HSC15408CR
Credits: P2
Periods/week: 4 Hours
M.M: (Pract) 50

1. Studying status of women in rural and urban community.
2. Identification of problems faced by women in rural and urban community.
3. Preparation of an album on women's issues and its presentation.
5. Designing and conducting training programmes for women related to Health Education Social and Economic aspects.
6. Study & Reporting on institutions supporting women Entrepreneurship in Kashmir. (Govt & Non-Govt).
7. Visit to 3 urban women entrepreneurial units and submitting a report in relation to its technical, marketing, economical, educational and financial analysis.
8. Visit to 3 rural women entrepreneur units and submitting a report.
To undertake an independent piece of research work on an issue of contemporary concern that contributes to the advancement of knowledge in the field of Extension and Communication and Women and Child Studies/any other topic related to this field.

The student will be guided and supervised by a member of the teaching faculty of the Institute. However, the dissertation in which the research culminates should reflect the student’s own work.
DEVELOPMENT OF CREATIVITY

Code: HSC15409CR

Credits: L 4

Periods/Week: 4 Hours

M.M: 100

Objectives

1. To understand the relevance & scope of studying creativity.
2. Become aware of the concept of creativity & various approaches to its study.
3. Understand the role of the individual, the content & socialization in developing creativity.
4. Become familiar with psychometric measurement & alternate ways of assessing.

Contents:

Unit I - Concepts of Creativity

- Historical development of creativity.
- Conceptual frame work----levels & traits of creativity.
- Types, process & stages of creativity.

Unit II - Approaches and perspectives to the study of creativity

- Neuropsychological perspective
  - Neuropsychological base of hemispherity
  - Learning motivational model
- Traditional perspective
- Modern psychological perspective
  - Psycho analytical, Humanstic perspective
• Cognitive and Non-cognitive Perspective
  ➢ Models on creative and training teaching

Unit III - Creativity and Developmental Factors
  ➢ Creativity through the life span
  ➢ Creativity in relation to intelligence, achievement, personality
  ➢ Factors affecting creativity.

Unit IV - Identification & Development of Creativity
  ➢ Measurement—Testing & non-testing techniques of assessing creativity & techniques of development of creativity.
  ➢ Training methods—Problem solving, brainstorming, inquiry training, synectics, morphological analysis, attribute listing, forced relationship, lateral thinking technique, creative problems solving.

References
1. Rather, A. R. Creativity.
PRINCIPLES OF GUIDANCE AND COUNSELLING

Code: HSC15410CR

Credits: L 4

Periods/Week: 4 Hours

M.M: 100

Objectives:

1. To understand the need for guidance and counseling in human development
2. To introduce basic concept in guidance and counseling.
3. To discuss the processes involved in counseling a different stages in life.

Contents:

Unit-I - Guidance and counseling

- Counselling: Concept, Levels, Purpose, Need, Principles and Elements.
- Ethical and Legal Guidelines.

Unit-II - Basic Approaches and theories

- Psychoanalytic(Freud)
- Person Centered Theory
- Cognitive Behaviour Theory
- Eclectic Counselling
- Counseling and Psychotherapy( Major differences)
- Differences in emphasis between directive and client centered techniques
- Types and steps of counseling:
Unit-III - Need for counseling for parents & children at Different stages of development

- Infancy
- Childhood
- Adolescence
- Adult and old age
- Types of Guidance and Counselling Services
  - Educational
  - Vocational
  - Social Relationships
  - Family and Marital Areas

Unit-IV - Guidance and counseling of special groups:

- Gifted
- Mentally Challenged
- Physical, Social, Emotional Disabilities
- Socially Educationally backward

References:

1. Interaction with practising counselors and therapists through visits to:
   - Hospitals
   - Orphanages

2. Learn about the counseling process:
   - Role play- (Psycho-Social problems of Adolescents)
   - Puppetry-(Traumatic disorders/ Social evils among Women)

3. Analysis of one case study about psycho social problems. Preparing and submitting a case report.

4. Plan and organize life style educational programme for adolescents on:
   - Nutrition and diet.(Nutrition awareness and recommended diets)
   - Healthy family life.(Reproductive health, Sexually transmitted diseases, Family planning measure)
Dissertation (T2)

Code: HSC15411CR

Credits: T2

Periods/Week: 4 Hours

M.M: (Tutori) :50

- To undertake an independent piece of research work on an issue of contemporary concern that contributes to the advancement of knowledge in the field of Human Development and Childhood Studies/any other topic related to this field.

- The student will be guided and supervised by a member of the teaching faculty of the Institute. However, the dissertation in which the research culminates should reflect the student’s own work.
Current & Emerging Concepts In Human Nutrition

Code: HSC15412DCE  
Credits: L 4  
Periods/week: 4 Hours  
M.M: 100

Objectives:

1. To orient students with current concepts in Human Nutrition

2. To Know about the Emerging trends in Nutrition

3. To make students understand the importance of fiber in relation to Health

Contents:

UNIT I: Defensive Nutrition Paradigm

➤ Phytochemicals: Concept and its role in prevention of diseases, Antioxidants & their health benefits.

➤ Concept of Nutrigenomics & Nutraceuticals.

➤ Probiotics and their beneficial effects, prebiotics.


➤ Nutritional Supplements & Ergogenic Aids- Types.

➤ Government Regulations of Food Safety- FSSAI.
UNIT II: Emerging trends in Nutrition

- Organic Foods & Organic Farming
- Functional Foods & their Benefits
- Commonly used Milk Substitutes
- Artificial sweetener and its types.
- Various Fat replacers in the diet
- Advanced concept of food preservation
- Placebo effect

Unit III: Food Technology

- Food Spelling.
- Food fortification & Enrichment- objectives, commonly fortified foods & methods of fortification.
- Irradiation- Safety & Quality of irradiated foods.
- Microwave Cooking- Its advantages & disadvantages.

UNIT IV: Fiber & its benefits

- Dietary fiber & its types (Soluble And Insoluble Fiber)
- Sources of Fiber & its components
- Importance of Fiber in Human Nutrition
- Role of Fiber in Prevention of Diseases
- Resistant starch & its Potential health benefits.
References:

2. Lea & Febiger USA Publishing.
FOOD SAFETY AND QUALITY CONTROL

Code: HSC15413DCE

Credits: L 4

Periods/week: 4 Hours

M.M: 100

Objectives:

1. Understand the importance of quality assurance in food industry.
2. Understand various tests and standards for quality assessment and food safety.
3. Understand various tests used to detect food adulterants.
4. Be familiar with the fundamentals that should be considered for successful quality control programme.

Contents:

Unit I: Quality Control

- Definition of quality, quality control and quality assurance, Total Quality Management and Different Quality Standards.
- Factors affecting Food Quality – Extrinsic and Intrinsic
- Functions of quality control in food Industry
- Introduction to statistical quality control and control charts
Unit II: Sensory Evaluation of Food Quality.

- Sensory tests – Trained panel members, testing laboratory, preparation of samples, techniques of smelling and tasting, testing time, design of experiment, reasoning for testing good quality evaluation card.
- Types of tests –
  - Difference tests – paired comparison test, duo-trio test, triangle test.
  - Rating tests – ranking test, single sample (Monadic test), two sample difference test, multiple sample difference test, Hedonic rating scale, numerical scoring test, composite scoring test.
  - Sensitivity test – sensitivity threshold test, dilution test, descriptive flavour profile method.
- Limitation of sensory evaluation

Unit III: Objective Evaluation of Food Quality

- Advantage, disadvantages and basic guide lines,
- Chemical methods, Physico-chemical methods, Microscopic examination and Physical methods.
Unit IV: Hazard analysis critical control point (HACCP)

- Introduction and Principles of HACCP
- Physical, chemical and biological Hazards in foods
- Consumers role and safe food practices – buying, storing, preparing cooking and serving.
- Food Safety and Standards Act.

References:


PROJECT MANAGEMENT AND WOMEN ENTREPRENEURSHIP

Code: HSC15414DCE

Credits: L 4

Periods/Week: 4 Hours

M.M: 100

Objectives:

1. To provide conceptual inputs regarding structure and development of women entrepreneurship.
2. To sensitize and motivate students towards entrepreneur management.
3. To understand the framework for identifying and evaluating projects.
4. To impart skills for planning and management of the projects undertaken.

Contents:

Unit I: Women Entrepreneurship:

- Concept and development of women entrepreneurship. Functions and role of women entrepreneurs.
- Characteristics and personal attributes of successful entrepreneurs. Developing entrepreneurial competencies.
- Institutional support in women entrepreneurship. Problems faced by SSI in J&K
- Problems faced by women entrepreneurs and their remedies.
Unit II: Project Identification:

➢ Identification of project, generation and screening of project ideas. Classification of projects.
➢ Forms of ownership - sole proprietorship, partnership, company and cooperative society. Factors influencing the choice.
➢ Steps for starting a small business, procedure and formalities for registration.
➢ Incentives and subsides- need and problems.

Unit III: Project Analysis:

➢ Market and demand analysis- Demand forecasting. Marketing problems and their remedies.
➢ Technical, management and economic analysis of projects.
➢ Estimation of cost of projects- objectives, components and basis of estimates.
➢ Working capita requirement and its estimates.
➢ Sources of finance - short term and long term sources.

Unit IV: Financial Analysis and Project Implementation:

➢ Proforma profit & loss statement and balance sheet.
➢ Techniques of financial analysis - Break-even analysis, pay back period, average rate of return. Net present value and internal rate of return.
➢ Project format—common format of a project proposal. Information base and rules governing the preparation of project proposal.
➢ Project implementation—pre-requisites for successful implementation. Monitoring, controlling and follow-up.
References:

PARENTING IN EARLY CHILDHOOD

Code: HSC15415DCE

Credits: L4

Periods/week: 4 Hours

M.M: 100

Objectives

- To understand the significance of parents role in early childhood.
- To develop skills to involve parents in early childhood education programmes.
- To learn to conduct parent education programmes.

Contents:

Unit I: Individual Parenting Roles.

- The task of parenting and the concept of parenting skills.
- Changing concept of parenthood and childhood.
- Being a competent parent.
- Determinants of parenting behaviour.
- Characteristics of the parenting roles.
  - The mothering role.
  - The fathering role.
- Concept of family, and family life cycle stages.

Unit II: Developmental Interaction in Early Childhood Years

- Parents role in developing self awareness in children.
- Family relations and communication.
Helping the child to learn to express and control emotions.
Helping children discover personal capabilities.
Establishing routines and showing responsible behaviour.
Learning social role and interactions with others.
Meeting the family needs during this stage.
Meeting the children’s needs.

Unit III: Techniques of parent Education in Preschool Setting

Informal Meeting: Occasional/accidental meeting, written printed-newsletters, circulars, notices etc.
Parent library, toy library.
Workshops/demonstration centre.
Parents corner.
Open house.
Large/small group meetings.
Individual meetings: Home visits, individual sessions.
Working with vulnerable families.

Unit IV: Parent Education and Support

Role of professionals.
Parents as family workers.
Flexibility to different needs.
Personal development of parents.
References:

6. Gillian, Pugh (1984): The needs of parents, practice and policy in parent education, Macmillan,
Participatory Tools and Methods

Code: HSC15416GE

Credits: L2
Periods/week: 2 Hours
Marks: 50

Objectives:
1. To understand meaning and principles of PRA.
2. To acquaint the students with different PRA methods.

UNIT I: Participatory Rural Appraisal & Space related PRA Methods

- Meaning, principles and advantages.
- PRA; process, team, structuring and choosing PRA team.
- Social, Resource and Mobility Map
- Services and opportunities
- Participatory Census Method.

UNIT II: Time related and Relation PRA Methods.

- Time line and Trend Analysis
- Daily Activity Schedule
- Dream Map
- Well Being Ranking
- Venn Diagram
- Spider Diagram
References:
Introduction to Guidance & Counselling

Code: HSC15417GE

Credits: L2

Periods/week: 2 Hours

Marks: 50

Objectives:

1. To understand general concepts of guidance and counselling
2. To discuss different theories involved in counselling
3. Importance & need of guidance and counselling

Unit-I - Guidance

- Guidance: Definition, nature and its functions
- Basic principles of Guidance
- Characteristics of Guidance
- Model of Guidance: Personal and Vocational Guidance
- Need of Guidance for Adolescence

Counselling

- Meaning and purpose of counselling
- Elements and steps in counselling
- Theories of counselling
  - Directive/Non-Directive
  - Psychoanalytic (Freud)

- Ethical and legal guidelines of counselling
Unit II: Need of Guidance for:

- Adolescence
- Gifted Children
- Family with special child
- Conflicted families

Need of Counselling for

- Adolescence
- Gifted Children
- Family with special child
- Conflicted families

References:

Introduction to Disabilities

Code: HSC15418OE

Credits: L2

Periods/week: 2 Hours

Marks: 50

Objectives:
1. To make the student aware about the concept of disabilities
2. To acquaint the student with different types of disabilities

Contents:

Unit I – Disability (Physical & Skeletal Disorders)
- Concept of normality, disability, impairment and handicap
- Physical disorders (causes of CNS disorders, Cerebral Palsy, Epilepsy, Spinal bifida, Spinal cord injuries)
- Arthritis, Amputation (causes)
- Mental retardation (causes and types)

Unit II – Sensory and Emotional Impairments (concept, causes and characteristics)
- Visual impairment
- Speech impairment
- Emotional impairments:
  - Autism
  - Schizophrenia
  - obsession and compulsion
References: