HOME SCIENCE - MINOR  
w.e.f. AY 2023-24 onwards

COURSE STRUCTURE

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Title of the Course</th>
<th>No. of Hours</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>01</td>
<td>Essentials of Home Science Extension</td>
<td>3 - 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Essentials of Home Science Extension Practical</td>
<td>2 - 1</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>02</td>
<td>Fundamentals of Food Science &amp; Nutrition</td>
<td>3 - 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fundamentals of Food Science &amp; Nutrition Practical</td>
<td>2 - 1</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>03</td>
<td>Nutrition during Life Span</td>
<td>3 - 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nutrition during Life Span Practical</td>
<td>2 - 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>04</td>
<td>Interior Design and Decoration</td>
<td>3 - 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interior Design and Decoration Practical</td>
<td>2 - 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>05</td>
<td>Marriage, Family and Child Welfare</td>
<td>3 - 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marriage, Family and Child Welfare Practical</td>
<td>2 - 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>06</td>
<td>Textile and Apparel Design</td>
<td>3 - 3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Textile and Apparel Design Practical</td>
<td>2 - 1</td>
<td></td>
</tr>
</tbody>
</table>
Outcomes of the course
The students will be able to:

A) **Remember and explain in a systematic way**
   - Learn the meaning, scope and concept of Home Science Extension.
   - Explain the importance of Extension Education in Home Science

B) **Understand and Use**
   - Understand the role Extension worker in community
   - Understand the Principles, steps in Teaching and Learning process

C) **Critically explains, judges**
   - Qualities of an Extension Worker
   - Different Teaching Methods and Teaching Aids in Communication Process.

D) **Working in out of prescribed areas under co-curricular activity**
   - Know the importance of Teaching Methods and Teaching Aids in Communication Process.
   - Know the barriers of communication and learn how to overcome them.

E) **Practical skills**
   - Learn Practical skills in planning, preparation of Audio-Visual Aids
   - Usage of bulletin board in extension education
   - Use of different types of Teaching methods and Audio-Visual Aids for different targetgroups.

**UNIT I Extension Education** -
- Meaning, Concept, Scope and objectives
- Formal and Non formal Education
- Philosophy and principles of Extension Education
- Role and Qualities of an Extension worker

**Unit-II Teaching and Learning Process**
- Teaching – Meaning, definition, steps in Teaching
- Learning – Meaning, definition, Elements of Learning
- Learning Situation – Definition, Elements of Learning Situation
• Principles of learning and their Implications for Teaching
• Motivation – Principles of Motivation in Extension
• Classification of motives

Unit-III Teaching Methods/Techniques
• Extension Teaching methods – Definition, Functions and Classification of Teaching methods – According to use and form
• Individual methods – Farm and home visits, Telephone calls, Personal letter, Result demonstrations.
• Group methods – Method demonstration, Group meetings/Discussions, Conferences, Field trips etc.
• Mass Methods – Print and electronic media, Internet, Social media and Exhibitions
• Factors to be considered in selection and combination of teaching methods

Unit-IV Audio - Visual Aids:
• Audio Visual Aids – Meaning and Classification
• Factors Influencing selection of Audio-Visual Aids
• Principles of Preparing in Planning, Presentation and evaluating in Audio-Visual Aids
• The cone of Experience

Unit-V Communication
• Communication – Meaning, Definition and scope of Communication
• Types of Communication – Verbal, Non Verbal, Small group and Mass Communication.
• Barriers to communication.

PRACTICALS
Credits : 01
1. Visit to a community/ village to find out the socio- economic needs of the people
2. Preparation of Survey Schedule
3. Preparation and display of teaching aids – Posters, charts, flash cards etc.
4. Display of bulletin board
5. Illustrated Lecture and Method Demonstration to any community on Home Science related Topics.

REFERENCES
5. Indhubala (1980), Gruhavignasastravistarana, Telugu academy text book publications

**CO-CURRICULAR ACTIVITIES**

1. Adoption of a village based on the socio-economic background.
2. Visit to an adopted village and conduct
   - Baseline survey regarding demographic, population, Educational and felt needs of the villagers.
   - Collection of data.
   - Pooling and Analyzing the data.
3. Preparation, use and evaluation of visual aids viz.,
   - Poster
   - Different types of charts.
   - Flash cards
   - Display of Bulletin Board.
4. Presentation of seminars in the class rooms.
5. Blackboard teaching for 15 minutes in the class room.
6. Promoting effective verbal and non-verbal communications among students.
Outcomes of the course

At the end of the course the student will be able to demonstrate the following:

A) Remember and explains in a systemic way

- Understanding the concepts of nutrition and food and its relation to health.
- Acquiring knowledge about macro and micro nutrients and their functions.
- Knowing the consequences of deficiency of taking nutrients.
- Understanding importance of non-nutrients in human nutrition

B) Understands and Uses

- Planning recipes by selecting appropriate foods based on the macro and micro nutrient composition.
- Selection of foods based on the nutrient composition for healthy and disease people.

C) Critically explains, judges and solves

- Planning and calculating nutritive values for the foods and recipes.
- Identification of signs and symptoms of different nutrient disorders.
- Practical knowledge on availability of seasonal and other foods by doing market survey.
- Listing out the common foods and their names in scientific and local languages.

D) Working in out of prescribed area under a co-curricular activity

- Selection of foods based on seasonal availability and planning recipes on the nutrient composition to healthy and diseased conditions.

E) Practical skills

- Market survey on different foods available and learning local and scientific names.
- Learn to identify different food samples and to know their nutrient composition.
- Planning of recipes according to nutrient components.

UNIT-I  Macro Nutrients
• Macro Nutrients – Classification, functions, digestion, absorption, dietary sources, RDA, Clinical manifestations of deficiency and excess and storage of the following in the body.
  ➢ Carbohydrates
  ➢ Lipids
  ➢ Proteins

UNIT – II Micro nutrients- Vitamins & Minerals
• Vitamins – Classification, functions, dietary sources, RDA, clinical manifestations of deficiency and excess of the following
  ➢ Fat soluble vitamins – A, D, E and K
  ➢ Water soluble vitamins – B Complex Vitamins - Thiamine, Riboflavin, Niacin, Pyridoxine, Folic acid, Cyanocobalamin and Vitamin C.
• Minerals – classification, functions, dietary sources, RDA, clinical manifestations of deficiency and excess of the following
  ➢ Macro minerals – Calcium, Phosphorous, Magnesium, Sodium and Potassium
  ➢ Micro minerals or Trace elements – Iron, Iodine, Fluorine and Zinc

UNIT - III Plant Foods
• Cereals and Millets–Structure, Composition and nutritive value, processing, selection, and use in cookery
• Pulses and Legumes– Composition and nutritive value, processing, selection, and use in cookery, Nuts and oil seeds– Nutritive value, use in cookery
• Vegetables and Fruits– Classification, Selection, Nutritional aspects, Pigments, Enzymatic and non-enzymatic browning.
• Spices and condiments – Nutritive value, use in cookery

UNIT - IV Animal Foods
• Milk and milk Products - nutritive value, use in cookery
• Egg -structure, nutritive value, methods to assess quality of eggs, changes during storage and use in cookery
• Meat, Poultry, Fish – Nutritive value, use in cooker

UNIT – V Food Processing
• Food Preservation – Methods, high temperature, low temperature, removal of moisture, irradiation and preservatives
• Food additives– Types and their role in food processing, Nutrient Enrichment– Germination, fermentation, fortification etc.
• Food Spoilage – Microorganisms causing spoilage – Factors responsible for spoilage and changes brought about in food by microorganisms.

PRACTICALS
Credits -1
1. List out the common foods and to learn their names in Telugu, English, Hindi and Urdu.
2. Learn to identify the different food samples and to know their nutrient composition.
3. Standardization of weights and measures of various food items.
4. Cereals, pulse and vegetable preparations and calculation of nutritive values of recipe.
5. Milk, meat, egg preparations and calculation of nutritive values of recipes.
6. Drying of foods using different methods ,
7. Fermentation process of foods.
8. Germination of cereals and legumes processing techniques.

REFERENCES
2. Longvah, T., Ananthan, R., Bhaskarachary, K. and Venkaiah, K. (2017). Indian Food Composition Tables, Published by NIN

CO-CURRICULAR ACTIVITIES
1. Student seminars on different nutrients.
2. Preparation of posters, charts, flashcards etc. related to different nutrients – Functions, RDA dietary sources, nutrient content of foods and deficiency symptoms.
3. Collections of food samples rich in particular vitamins and minerals like calcium, iron etc.
4. Visit to food stores, vegetable and fruit markets to study locally available foods.
5. Study projects to collect the data from people. Eg. Foods avoided or given in specific conditions.
6. Celebration of Important Days (National and International)
   ➢ World’s Breast Feeding Week(August 1st -7th )
   ➢ Nutrition Week – September 1st - 7th
   ➢ Nutrition Month – September month
   ➢ Hand Washing Day – October 15th
➢ World Food Day – October 16th
Outcomes of the course

The students will be able to:

A) **Remembers and explain in a systematic way**
   - Understanding the nutritional problems and nutrition requirements of the community.
   - Acquiring knowledge about RDA, food groups, steps in planning a diet.

B) **Understanding and Uses**
   - Planning of nutrition diets according to RDA for different age groups-infancy to old age and physiological conditions -Pregnancy and lactation
   - Different methods of assessing nutritional status –Anthropometry, biochemical, clinical examination and diet survey etc.,

C) **Critically explains, judges & Solves**
   - Preparation of nutritious diets for different age groups meeting the RDA.
   - ABCD-techniques for nutritional status assessment.

D) **Working in out of prescribed areas**
   - Planning programs to combat nutritional problems in community.

E) **Practical skills**
   - Planning & Preparation of diets for different age groups
   - Calculations of nutritive values of the diets and RDA for different age groups.
   - Nutrition education techniques.
   - Assessment of nutritional status using ABCD techniques.

**THEORY**

**Unit-I Meal Planning – Nutrition during Adulthood,**
- Principles of meal Planning, Balanced Diet. Dietary guidelines for Indians
- Nutrition for Adults – Reference man and Reference women – Nutritional requirements for adult man and woman of different physical activities (Sedentary, Moderate and Heavy work).

**Unit-II Nutrition during Pregnancy and Lactation**
• Pregnancy – Nutritional and Food requirements, Physiological changes and complications.
• Lactation – Physiology, Nutritional and Food requirements

Unit-III Nutrition during Childhood
• Infancy – Nutritional requirements – Breast feeding and its advantages; Artificial/bottle feeding; Weaning Practices, Supplementary foods.
• Early and Late childhood – Nutritional requirements – RDA, Inculcating healthy eating habits among pre-schoolers – importance of packed lunch and snacks

Unit-IV Nutrition during Adolescence and Old age
• Adolescence-Nutritional requirements – RDA, Food habits
  ➢ Nutritional problems and Eating Disorders- Anorexia and Bulimia.
• Geriatric Nutrition- Physiological changes in elderly
  ➢ Factors affecting food intake
  ➢ Nutrient needs and Requirements
  ➢ Nutrition related problems and their diet management

Unit-V Nutritional Status Assessment

• Assessment of the Nutritional Status of the Community – Need and objectives
• Direct methods – Anthropometry, Biochemical Analysis, Clinical Examination, Diet Surveys, Functional assessment and Biophysical or Radiological examination.
• Indirect methods – Ecological factors and Vital Health Statistics

PRACTICALS
Credits -1

1. Planning and preparation of a balanced diet for Adult man and women.
2. Planning and preparation of a balanced diet for Pregnant and Nursing mother.
3. Planning and preparation of a balanced diet for a Pre School Child.
4. Planning and preparation of a balanced diet for School child and an Adolescent
5. Planning and preparation of low cost Nutritious recipes
6. Use of Anthropometric measurements in assessing the Nutritional Status.

REFERENCES

CO-CURRICULAR ACTIVITIES

1. Academic based:
   - Preparation of charts and posters for Nutrition education
   - Essay writing competitions
   - Group discussions on topics relevant to community nutrition
   - Exhibition on low cost nutritious foods and balanced diet
2. Lab/Research based:
   - Visit to Anganwadi centre
   - Visit to school lunch programs
   - Visit to village and urban slum area for assessing the nutritional status of rural and urban slum population
3. Value based:
   - Nutrition and Health awareness camp
   - Poster and puppet show regarding nutrition education and importance of community participation
4. Celebration of Important Days (National and International):
   - Breast feeding week-August 1to7th
   - International Women’s day-March 8th
   - World Health day-April 7th
   - International day of elderly-October 1st
Outcomes of the course

At the end of the course, the students will be able to learn

A) **Remember and explain in a systematic way**
   - Explain design, types of design, elements, Principles of design and colour harmonies.
   - Understands colour concept, lighting methods and arts to decorate the interiors based on aesthetic performance.
   - Acquire knowledge on selecting appropriate building materials, equipment and finishes with regard to safety and eco-friendly construction.

B) **Understands and Uses**
   - Apply the elements and principles of design and colour harmonies in the arrangement of furniture, accessories in different rooms, flower arrangement and table setting

C) **Critically explains, judges and solves**
   - Factors affecting the purchase of furniture; colour harmonies in different rooms

D) **Working in out of prescribed areas under co-curricular activity**
   - Learn elements and principles of design by drawing, painting by collecting pictures from magazines
   - Preparation of Chart, Posters and albums using principles of art and design
   - Observation of Flower Arrangements at different places.

E) **Practical skills**
   - Learn elements and principles of design by drawing, painting by collecting pictures from magazines
   - Learn to arrange furniture in different rooms by applying elements and principles of design
   - Learn to arrange Flower Arrangements by applying elements and principles of design
   - Learn to lay the table formal and informal parties.

**THEORY**

**Unit-I Interior Design & Decoration – Elements & Principles**
- Interior Decoration – Meaning, objectives of Interior decoration.
• Good taste – Meaning, development of good taste
• Design – Definition, Classification of design – structural and decorative designs, Types of Decorative Design.

• Elements of design – Line, Form, Texture, Colour, Value
• Principles of art – Harmony, Proportion, Balance, Emphasis and Rhythm

Unit- II Interior Design- Colour
• Colour – its importance and effect; Prang’s colour system – Primary, Secondary, tertiary and quaternary colours, characteristics of colour- Hue, Value and Intensity
• Colour schemes, classification of colour schemes and their use in interior decoration;
• Factors affecting choice of colour schemes for different rooms and different areas in the house.

Unit-III Interior Decoration- Flower Arrangement
• Flower Arrangement -Elements and principles of art in flower arrangement.
• Types of flower arrangement – Line, mass, line & mass, miniature etc.
• Styles of flower arrangement – Traditional, oriental (Japanese) and modern.
• Materials and equipment used in flower arrangement.
• Points to be considered while selecting, storing and making of flower arrangements.

Unit-IV Interior Decoration -Furniture & Furnishings
• Furniture Arrangement – Selection of furniture and considerations in arranging the furniture, Furniture arrangement in different rooms.
• Furnishings – Classification, Factors in Selection.
• Lighting – Natural and Artificial Fittings – Types and their use in Interior Decoration

Unit-V Interior Decoration -Accessories
• Accessories – Functions, classification, selection and care of accessories
• Window Treatments – Types of windows and window treatments; Factors to be considered in the selection of curtains and draperies
• Table setting – General rules for setting and laying the table; Types – Formal and Informal table setting

PRACTICAL
Credits -1

1. Interior Design – A) Elements of Design, B) Types of Design – Natural,
Decorative, Types of Decorative Design - Naturalistic, Stylized, Geometric and Abstract – Drawing/ Sketching


4. Different types of flowers arrangement.

5. Furniture arrangement in different rooms – Sketching/ Drawing Room plans and pasting.

6. Table setting – Formal and informal table setting.

7. Window treatments – Types

**REFERENCES**


**CO-CURRICULAR ACTIVITIES**

1. Drawing, colouring, and painting using principles of art, Interior designing & Decoration

2. Modelling- clay, chart, cardboard etc.

3. Quiz, Seminars, debates and Group discussion

4. Chart and Poster Presentations

5. Organizing exhibitions

6. Flower Arrangements
7. Table Settings
8. Furniture arrangement
9. Album making
Outcomes of the course

The students will be able to:

A) **Remember and explain in a systematic way**
   - Factors essential for harmonious and wholesome family living.
   - Knowledge on pubertal changes, adolescence and appreciate value of marriage in Indian families.
   - Meaning of Pre-marital counselling and Post-marital counselling.

B) **Understand and Use**
   - Understand the need for planning and preparation of parenthood.
   - Understand the importance of adjustments to strengthen marital and family relationships.

C) **Critically explains, judges**
   - Adjustment in marriage.

D) **Working in out of prescribed areas under co-curricular activity**
   - Visiting counselling centres and understanding coping up strategies of problems.

E) **Practical skills**
   - Visiting different governmental and nongovernmental organizations working for the welfare of children.

**THEORY**

**Unit I- Marriage**
- Marriage –Definition and Functions, needs and goals. Criteria for successful marriage.
- Values and goals of marriage – Indian context. Different Marriage practices- Advantages and disadvantages.
• Preparation for Marriage – Factors to be considered in the choice of marriage partner. Modes of mate selection, Self-choice marriage and arranged marriage – Advantages and disadvantages.

Unit II Marital Adjustments and Family
• Adjustments in marriage – In laws, sex adjustment to mate, adjustment to parenthood, and financial adjustments.
• Family– Meaning, Definition, functions of family, sociological significance of family.
• Types of Family–Definitions of Joint, Extended, Nuclear Families, Alternate family styles–Modern trends in family –Advantages and disadvantages.
• Changing Indian family structure –Changing family functions.

Unit III Parenting
• Parenting –definition-Transition to Parenthood – Factors that influence Planned Parenthood.
• Parenting Styles –Authoritarian, Authoritative and Permissive styles, Influence of child rearing practices on child’s Behaviour.
• Role of father in child rearing

Unit IV Child and Family Welfare
• Child Welfare Programmes- Concept of Child welfare, principles. Programmes and services for children, crèches, day care centres.
• Family Welfare – Objectives of family Welfare ; Family Welfare Programmes and agencies -Government and Non-Governmental organizations-

Unit V Legislation relating to Marriage, Family and Divorce

• Legislation related to Marriage: Hindu Marriage Act, Special marriage Act, Dowry Prohibition Act.
• Legislation related to Family: Need for family Counselling centres and family court
• Marital disharmony-Divorce -Reasons for Divorce-Stages of divorce process, Laws related to divorce

PRACTICAL
Credits -1

1. Case study of Married couple-Marital adjustment
2. Case study of marital disharmony
3. Visit to family counselling centres
4. Visit to Day care centres
5. Visit to Orphanage/ NGO s for Child welfare
6. Visit to SOS village

REFERENCES

CO-CURRICULAR ACTIVITIES
1. Analysing the reasons for suicides among adolescents reported in mass media
2. Identification of Mate selection criteria depicted in Mass media
3. Visiting counselling centres and understanding coping up strategies of problems
4. Familiarise with problems of elderly through case studies and institutional visits.
Outcomes of the course
The students will be able to:

A) **Remember and explain in a systematic way**
   About the Principles of design, elements, classification and its importance in textile design.

B) **Understand and Use**
   Different types of fibers and fabrics.

C) **Critically explains, judge**
   Analyse the structure of loom and classification of weaves.
   The estimation of designs suitable for dyeing and printing, dye paste requirement, and also estimation of suitability of material.

D) **Working in out of prescribed areas under co-curricular activity**
   Identify the types of weaves (Basic weaves and decorative weaves).

E) **Practical skills**
   Stitching of children, women garments and practicing of surface Ornamentation of the fabric

THEORY

UNIT - I: Introduction to Textile design, classification of methods by which design is obtained in fabrics

UNIT - II: Structural Design in fabrics-
   (a) Weaving: Basic weaves, Decorative weaves
   (b) Knitting, braiding, felting, bonding, crochet and tatting.

UNIT - III: Surface design on fabrics. Preparation of fabric for dyeing and printing
   a) Dyeing: i) classification of dyes. ii) mode of action and application for various fibers and fabrics.
   b) Printing: Block, Roller, Screen, Stencil, Tie and Dye and Batik.
   c) Finishes: Scouring, Bleaching, singeing, weighing, tentering, mercerising, starching, calendaring, embossing, moireing, napping, crepe effect.

UNIT - IV: Costumes and Jewellery of men and women of India.
   a) Northern states: Kashmir, Punjab
   b) Southern states: Tamil Nadu, Kerala, Karnataka and Andhra Pradesh
UNIT V: Traditional Textiles- Dacca Muslin, Banarasi brocade, Chanderi, Bandhini, Patola, Pochampalli, Kalamkari.

PRACTICAL
Credits -1

1. Preparation of material for stitching. 2. Recording of body measurements.
   b. Construction of Salwar and kameez
   c. Construction of House-coat. (optional)
   d. Construction of Sari blouse- Demonstration (optional)
   e. Construction and identification of various weaves
   f. Different methods of printing (Preparation of fabric samples)
      i) Block
      ii) Stencil
      iii) Spray
      iv) Vegetable
      v) Fabric painting
      vi) Tie and dye

REFERENCES:

Co-curricular Activities: a). Mandatory: (Training of students by teacher on field related skills: 15 hrs)

For Teacher: Training of students by teacher in laboratory and field for a total of 15 hours on visit to dyeing, printing and embroidery units etc. to demonstrate the process.

For Student:
1. Visiting nearby hand embroidery units and observing different traditional embroidery techniques.
2. Visiting nearby textile emporiums and observing the fabrics of different states.
3. Preparing/Making of Hand and Traditional embroidery samples.

c) East: Assam, West Bengal d) West: Maharastra
4. Preparing/Making of Dyed, printed and painted textile samples.
5. Max marks for Field Work Report: 05.

Suggested Format for Field work: Title page, student details, content page, introduction, work done, findings, conclusions and acknowledgements.

Suggested Co-Curricular Activities

1. Training of students in Dyeing, Painting and Printing various fabrics.
2. Assignments, Seminars, Group discussions, Quiz, Debates etc. (on related topics).
3. Drawing sketches, Paintings using various colour harmonies.
4. Video show and films on Interior design works and decoration of Interiors.
5. Preparation of resource files by collecting the history, process, application and typical designs of different states.
6. Invited lectures and presentations on related topics by Textiles experts