INTRODUCTION TO HOME SCIENCE-I

Code : HMB151
Total M.M.: 200 (8 Credits)

Theory
MM : 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30 marks
End-Semester Examination of two hours duration: 60 marks

Objectives:
To enable students to gain an initial understanding of Home-Science and its various branches.

Theory:
Unit-I - Introduction to Home Science:
- Concept and interdisciplinary nature of Home Science.
- Scope of Home Science
- Role of Home Science Education for personal growth and professional development.

Unit-II – Importance of Communication:
- Historical background of Communication
- Concept, scope and functions of Communication.
- Elements of Communication and their characteristics.
- Principles of Communication.

Unit-III- Importance of Textiles:
- Importance and scope of textiles in day to day life
- Definition of fibre, yarn and fabric.
- Sewing Machine- its parts, common defects and Remedies.

Unit-IV- Introduction to Human Development:
- Definitions and need to study Human Development,
- Human development as a scientific discipline
- Obstacles in studying Human Development

References
4. Deulkar Durga, (1976); Household textile and Laundering Work, 3rd edition, Atmaram and sons, Delhi
5. Doongaji S., (1975); Basic process and clothing construction, 4th edition, Rao Prakashan, New Delhi Gross,
Practical:
Code:HMB1P1
MM: 100 marks (2 Credits)
Continuous Evaluation: 40 marks
End-Semester Examination: 60 marks

- Visit to Crèche
- Planning and preparing an article out of waste,
- Basic hand stitches and buttons
- Fundamentals of display and principles of layout,
- Colour wheel and Colour Schemes.

References

CBCS
B.Sc. I Semester

Fundamentals of Physiology and Hygiene

Code : HMB-152
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To understand the common physiological process.
To understand the concept and importance of sanitation and hygiene.
To identify the hazards of environmental pollution.

Theory:
Unit I -
- Physiology of Menstruation,
- Physiology and psychology of pregnancy,
- Concept and stages of parturition,
- Physiology of lactation
- Composition and importance of breast milk

Unit II -
Causative agent, symptoms, mode of transmission, incubation period, control, care and prevention of
- Cholera, Typhoid and Dysentery
- Small pox, chickenpox, and measles
- AIDS and Hepatitis.
- Malaria and Dengue

Unit III –
Common pollutants, causes and remedial measures of
- Air pollution
- Water pollution
- Soil pollution and
- Noise pollution,

Unit IV-
- Definitions of health, sanitation and hygiene,
- Elements of food sanitation and hygiene
- Methods of Refuse disposal

References:
Fundamentals of Economics

Code : HMB-153
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks (4 Credits)

Objectives:
To understand the basic concept of economics.
To understand the importance and functions of money.
To understand the rights and responsibilities as consumers.

Unit I - Concept of economics:
Definition, concept, scope and usefulness of economics.

Unit II - Essential economy:
Types of economics, Factors of production, National Income, Per capita Income, Business Organizations

Unit III - Monetary system:
Function and Importance of money, types of Banks- functions and uses of information and technology in banking, taxation, causes and classification.

Unit IV - Consumer economics:
Definition of consumers, Consumer redressal, right and responsibilities of consumers, Consumer Price Index.
Definition, Characteristics and types of markets.

References:
CBCS
B.Sc. I Semester

Fundamentals of Psychology

Code : HMB154
Total M.M.: 100( 4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To enhance the personality development capabilities.
To develop strategies to cope up with conflict and frustration.
To impart the knowledge of improving memory by suggesting suitable methods.

Unit I - Introduction to Psychology:
- Definition of psychology
- scope of psychology
- Methods used in psychology: Experimental and survey methods.

Unit II – Learning:
- Definition of learning
- Factors affecting learning
- Theory of classical and operant conditioning

Unit III- Memory
- Definition of Memory
- Short and long term memory.
- Methods of measuring memory: Recall, Recognition, and Relearning.

Unit IV - Personality and Adjustment:
- Definition of personality
- Factors influencing personality
- Concept of adjustment, conflict, frustration
- Characteristics and Methods of Adjustment Mechanism

References
CBCS
B.Sc. II Semester
INTRODUCTION TO HOME SCIENCE-II

Code : HMB 251
Total M.M.: 200 (6 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To make the students understand the basic concept of Nutrition,
To understand the basic concept of Human Development.

Theory:
Unit –I- Introduction to Food and Nutrition:
- Concept and definition of terms: Nutrition, malnutrition and under nutrition.
- Scope of Nutrition,
- Basic food groups and its importance in the diet.

Unit-II- Food Preparation :
- Points to be considered while buying foods
- Definition of various terms used in cooking (peeling, pounding, grinding, sprouting, mixing, kneading, fermenting, whipping, grating, binding, folding, mashing, stuffing, coating, Blanching, marinating, drying, roasting, and filtering)
- Purpose and methods of cooking and their effect on nutritional values

Unit-III – Introduction to Management:
- Definition and concepts of management
- Scope and principles of management
- Interdisciplinary nature of management

Unit-IV – Classification of Resources:
- Meaning and characteristics of resources
- Resources in the family- human and non-human
- Factors affecting utilization of resources.

References
Practical:
Code: HMB 2P1
MM: 100 marks (2 Credits)
Continuous Evaluation: 40 marks
End-Semester Examination: 60 marks

- Survey of seasonal foods available in the market,
- Preparing food using different methods of cooking.
- List of Household equipments used and supplies in cleaning and maintaining resource management kit.
- Cleaning, care, maintenance and Polishing of: Iron, aluminium, copper, silver, brass, Ceramic and plastic.

References
Fundamentals of Biology

**Code**: HMB 252
**Total M.M.**: 100 (4 Credits)

**Theory**
**MM**: 100 marks (4 Credits)
**Sessional**: 10 marks
**Mid-Semester Examination of one hour duration**: 30
**End-Semester Examination of two hours duration**: 60 marks

**Objectives**:
Gain general understanding of uses and morphology of important plants.
Understand application of Botany to kitchen garden.
Learn about pest management and control.
Gain general knowledge of some common diseases and their management.

**Theory**:

**Section A: Fundamentals of Botany**

**Unit I** - **Economic Botany**:

**Unit II** – **Principles of planning and cultivation**:
Laying out of kitchen garden, cultivation of vegetables (Potato and Tomato), fruits (Mango and Banana), herbs (Ocimum and Mint).

**Section B: Fundamentals of Zoology**

**Unit III** – **Introduction to Applied Zoology and Human Welfare**, Pharmaceuticals from animals, Animals of economic importance fishes, honey bee, silk insect (brief account of apiculture and Seri culture)

**Unit IV** – **Control of human parasites and insect pests**: Life history of ascaris, Plasmodium (Malarial parasite). Insect pests of paddy, sugar cane, potato and citrus fruits and stored grain pest.

**Reference**:
1. B.P., Pandey, (1999), Economic Botany, S. Chand Ltd.
Fundamentals of Physics and Fundamentals of Chemistry

Code : HMB 253
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To enable the students to:-
Understand the principles of Physics and their application in household equipments.
Develop special skills in using and maintaining household equipments effectively.
To create awareness among the students about the judicious use of chemicals in
day to day life.
To improve their knowledge of household chemistry.

Section A: Fundamentals of Physics

Unit-I - Mechanics, Heat and Light:
- Properties of matter (Melting Point, Boiling Point, Density, Volume, Mass, conductivity, ductility etc.) their application to household equipments
- Simple machines: Scissors, eggbeaters, choppers, graters, holding tongs,
- Heat and its application to household equipments: pressure cooker, solar cooker, air cooler, air conditioner and refrigerator.
- Light and its application, colors: sources of color, spectrum.

Unit-II – working principle of Appliances
Choice, care and working principle of
- Electric Mixers
- Electric kettles
- Irons
- Hair dryer
- Washing machine
- Water heater, and
- Toaster.
**Section B : Fundamentals of Chemistry**

**Unit III - Drugs and cosmetics:**
- Basic concepts of Organic Chemistry,
- Simple drugs and medicines used in the home: headache remedies, pain relievers, laxatives, burn remedies, household antiseptic and disinfectants, antibiotics, sulpha drugs.
- Elementary study of essential oils perfumes and flavors.
- Compositions, preparations and intelligent use of cosmetics: face products, creams, lipsticks, shampoos, depilatories.

**Unit IV – Pesticides, rubbers and fuels:**
- Pesticides and their judicious use in home, precautions to be observed while using them.
- Elementary study of high rubbers, elastomers and their application in daily living, fuels, calorific value, fire extinguisher suitable for home.

**References:**
Fundamentals of Sociology

Code: HMB 254
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To understand dynamics of marriage and family system.
To analyze the changing pattern of social relationship.

Theory:
Unit I - Introduction to Sociology:
Definition, meaning, scope of sociology: Branches of Sociology. Relationship with other social sciences.

Unit II - Marriage as an Institution:
Definition, function, types of marriage, divorce and separation, kinship terminology.

Unit III - Types of Community:
Definition and types of community, Indian Village as community, population education.

Unit IV - Social Change in India:
Social inequality, social mobility, social control, theories and factors of social changes, diffusion and modernization.

Reference:
Objectives:
To develop an understanding of Human Development and Family Studies with life span perspective.
To enable the students adapt in social environment.

Unit I – Bases of growth and Development:
- Definition of growth and development
- Principles of Human Development
- Role of Heredity and environment in Development

Unit II – Prenatal Development:
- Importance of conception
- Definition and Characteristics of prenatal periods.
- Hazards and Factors affecting prenatal periods.

Unit III – Aspects of Development:
Physical, Motor, Social and language development during
- Infancy,
- childhood (Early and late), and
- Adolescent.

Unit IV – Intelligence:
- Definition and concept of intelligence,
- Factors affecting intelligence
- Guilford model of intellect

References:
CBCS
B.Sc III semester
Fundamentals of Textiles

Code : HMB-352
Total M.M.: 200 (8 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To impart the knowledge of textile fibers in terms of their production and properties,
To have hands on training in textile designing using surface design techniques.

Theory:
UNIT I - Introduction to textile fibres and their properties:
- Fibres: classification, primary and secondary properties
- Types of Yarns: simple, complex and Textured
- Yarn properties: yarn number, twist, thread

UNIT II - Fibers and their properties and processing:
- Natural: cellulosic (cotton, linen,), protein (wool, silk)
- Man-made: regenerated rayon, acetate
- Synthetic: polyester, nylon, acrylic

UNIT III - Fabric finishes:
- Basic finishes: Bleaching, tentering, singeing, sizing, calendaring
- Special finishes: Mercerization, shrinkage control, napping, resin finish.

UNIT IV - Dyes and design techniques:
- Classification of dyes & their applicability,
- Surface design: block printing, roller printing and screen printing
- Woven design: Decorative weaves.

REFERENCES
4. Tortora, Phyl is (1978) : Understanding Textiles, Macmillan publishing Co, Inc.
Practical
Code: HMB-3P1

MM: 100 marks (4 Credits)
Continuous Evaluation: 40 marks
End-Semester Examination: 60 marks

Introduction to laundry process


-Dyes and printing techniques: 
  Dyes: Batik Dyeing, Tie and dye. 
  Printing: Block Printing, Screen Printing,

-Study of Tools and equipment: for cutting and sewing of garments

-Care of clothing: Mending, Patchwork: plain and printed patches, darning

-Drafting: Basic bodice, sleeve block, collar.

-Stitching: A line frock/gathered frock/Jhabla (for an infant).

REFERENCES
CBCS  
B.Sc. III Semester 

**Essentials of Human Nutrition**

*Code*: HMB-353  
*Total M.M.: 100 (4 Credits)*  

**Theory**  
*MM: 100 marks (4 Credits)*  
*Sessional: 10 marks*  
*Mid-Semester Examination of one hour duration: 30*  
*End-Semester Examination of two hours duration: 60 marks*

**Objectives:**  
To make the students aware about the importance of nutrients & the concept of nutrition.  
To develop the skills of applying the learned knowledge of nutrition in day to day life.

**Theory:**  
**Unit I - Proximate Principles:**  
Proteins- Composition, digestion, functions, sources, quality of protein, supplementary value of protein.  
Carbohydrate- Composition, Classification, digestion, functions, sources, dietary fiber, effect of deficiency.  
Fats- Composition, digestion, function, functions, sources.

**Unit II - Micro-Nutrients:**  
Minerals- Functions, sources & their relative availability, effect of deficiency of Calcium, phosphorus, Iron and Iodine.  
Vitamins- Classification, functions, sources, factors affecting destruction, factors enhancing content of fat soluble vitamin A, D, E, K, Water soluble vitamin – B-Complex, Ascorbic acid.

**Unit III - Food from plant origin:**  
- Beverage, Cereals, Pulses and legumes, Fruits and vegetables, Spices and condiments.

**Unit IV - Food from animal origin:**  
- Milk and milk products, Egg, Meat, fish, poultry,  
- Miscellaneous foods:  
- Fats, Nuts and Oils, Gelatin dishes, Novel Foods.

**References:**  
- Elizabeth Nash- Cooking Craft.  
- Hughes O. and Bennion- Introductory foods  
- Basic food preparation , Lady Irwin college.  
- Mc devil M.E.,Mudambee S.R- Human Nutrition Principles and Applications in India.  
- Robinson C-Normal and Nurapeutic Nutrition  
- Swaminathan M-Essentials of food and Nutrition Vol-I and Vol-I.
Unit I – Creativity:
Concept and definition of creativity.
Nature and characteristics of creativity
Taylors level theory of creativity

Unit II – Individual differences:
Meaning and definition of individual difference
Types or varieties of individual differences
Determinants of individual differences.

Unit III – Influence of relationships:
Meaning and types of Child rearing practices
Effect of child rearing practices on parent child relationship
Role of peers and parents during adolescence
Influence of school.

Unit IV – Theories of human development
Psychosexual Theory of freud, kohl’s Berg’s Theory of moral development,
cognitive theory of Piaget, Psychosocial theory of Erickson and Social learning
theory of Bandura.

References:
  New Delhi: Stage Publication.
- Srivastav , A.K.(1993): Child and Adolescent Psychology: Seminar readings,
  New Delhi.
Practical:

*Code:* HMB-4P1

*MM:* 100 marks (4 Credits)

*Continuous Evaluation:* 40 marks

*End-Semester Examination:* 60 marks

- Creche Vist
- To observe developmental aspects during infancy, early and late childhood.
- To conduct a study using survey method on individual differences among adolescence.
- Analysis of creativity skill during early and late childhood.

References:

CBCS
B.Sc IV Semester
CLOTHING CONSTRUCTION

Code :HMB-452
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
-To equip the students with an in-depth information regarding various fabric construction techniques,
-To impart working knowledge of pattern development and garment construction,
-To enable intelligent selection, use and care of clothing.

Theory:
UNIT I: Techniques of fabric construction:
Loom: its parts and working.
Weaving: Plain, twill and satin weave and their derivatives.
Non woven: braiding, felting, bonding, knitting and crocheting.

UNIT II: Principles of clothing construction:
Sewing machine: Its parts, common defects and remedies.
Drafting and making paper patterns, preparation of fabrics for garment making, lay out of patterns, cutting and marking.

UNIT III: Importance of clothing:
Functions of clothing and its sociological and psychological importance, factors affecting the selection of clothing: climate, occasion, occupation, fashion and figure etc, factors considered in selection of clothing for self and family- design, durability, appearance, texture, price, labels and colorfastness, wardrobe planning: meaning and importance.

UNIT IV: Care and maintenance of clothing:
REFERENCES

- Eve Borrett; (1967). How to become a “Professional” amateur dressmaker; A. Wheaton and Co; Ltd, Exeter.
CBCS
B.Sc. IV Semester
Process of Media and Communication

Code : HMB-453
Total M.M.: 200 (8 Credits)

**Theory**
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

**Objectives:**
To enable the students develop skills in use of methods of communication.
To enable them understand process of communication.

**Theory:**
**Unit I - Introduction to communication:**
Models of communication, elements of communication, nature of communication, mode of communication and their role in communication process.

**Unit II - Sociology and psychology of communication:**
Barrier of communication, types of communication, Communication process-Monologue or closed communication.

**Unit III - Media for development communication:**
Folk media- Song, Stories, Puppets, Games, Street theatre.
Print media- Posters, Charts, Pamphlets, Leaflets, folders, newspapers, periodicals and books.
Audio visual media- **Audio:** Audiotapes, radio broadcasts, **Visual:** slides, pictures, drawings, photographs, videos, films- documentary and feature films.
**Audio-Visual-TV**

**Unit IV - Methods of communication in Development:**
Interview, House visits, lectures, group discussions, role plays, personal conference, demonstration, workshops, letters, public meetings, posters, charts, flash cards, flip albums.

**References:**
-Manorama Year Book (latest)
-Rudramoorhty, B.(1964), Extension in planned Social Change, Allied Publishers Private Ltd:
Practical:
Code: HMB-4P2
MM: 100 marks (4 Credits)
Continuous Evaluation: 40 marks
End-Semester Examination: 60 marks

Practical

- Fundamentals of displays and principles of layout: Colours Schemes, Colours harmony, balance etc.

- Preparation and evaluation of effective use of media and methods: Chart, Posters, Flash cards, flip albums.

References:
- Manorama Year Book (latest)
- Rudramoorhty, B. (1964), Extension in planned Social Change, Allied Publishers Private Ltd:
  Chandra, Arvind
Essential of Resource Management

Objectives:
To make students aware of managerial functions in family and at work place.
To evaluate their effectiveness of management skills.

Theory:

Unit I – Importance of Management:
Management process, management Functions, management abilities-technical, conceptual and human.

Unit II - Management in family living:
Concept of family, role of family in home management. Classification of families on the basis of- income, location, profession, quality of human resources in the family.

Unit III - Decision making:
Decision making as the crux of management, definition, meaning, types, tools and techniques, decision tree.

Unit IV - Motivation Management:
Values and their classification, goals and their types, Standards: conventional and modern, flexible and rigid, economic and non economic.

Reference:
- Bigelow, H.F. family Finances, J.B.Lippincot and Co: New york.
- Deacon and Firebaugh (1975) Concept of Home Management, Houghton Mifflia Company :USA
- Good year and Klohr, Management for effective Living, John Wiley and Sons Inc New York.
- Jacob, Thankamma (1979) A textbook of Applied Chemistry, Macmillan company
CBCS
B.Sc V Semester
Child Welfare in India

Code : HMB-551
Total M.M.: 200  (8 Credits)

**Theory**
MM: 100 marks (4 Credits)
Sessional : 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

**Objectives:**
To teach students about the concept of child welfare in India.
To develop sensitivity in students to contribute to the welfare of children in need.

**Theory:**
**Unit I**
Concept of child welfare,
philosophy of Child Welfare,
evaluation of Child Welfare services in India,
major organizations offering services to Normal Children

**Unit II**
International Year of the Child (1979),
Indian’s theme objectives,
approach strategy,
guidelines for implementing National Plan for IYC.

**Unit III**
Girl Child and Girl Child labor,
Gender disparities and its reason,
Action needed to remove disparities,
Health status, nutritional status and educational status of Girls Children,
Recreation for Girl Child.

**Unit IV**
National Policy for Children,
Adoption Policy
ICDS- objectives, beneficiary services, and achievements
Services for Children in need:
Institutional case and institutional services for disabled children
Services for blind, deaf and mentally retarded children.
Services for working Child and street Child.

**References :**
Practical:

*Code:* HMB-5P1

*MM:* 100 marks (4 Credits)

*Continuous Evaluation:* 40 marks

*End-Semester Examination:* 60 marks

**Practical**

- Visit to Blind School.
- Visit to Crèche, activities for crèche children.
- Visit to Orphanage.
- Case study of working child, Street child and visually challenged child.

**References:**

CBCS

B.Sc V Semester

Nutrition for the family

Code : HMB-561

Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To introduce Diet planning.
Nutritional requirements and consideration during the life cycle.

Theory:

Unit I - Energy Requirement:
Factors affecting caloric requirement: BMR, specific dynamic action of food, activity, age, climate, physiological condition, Methods of assessment of energy expenditure: direct and indirect methods.

Unit II - Nutrition in periods of rapid growth and physiological stress:
Pregnancy – Physiological adoption, complications of pregnancy, nutritional requirement, Nutritional problems.
Lactation – Physiology of lactation, factors affecting lactation nutritional requirement, Nutritional problem.
Infancy – Nutritional requirements, Breast feeding vs artificial feeding, weaning and supplementary feeding of premature infant, Nutritional problem.

Unit III - Nutrition during the life span:
Preschool child: Nutritional problems of preschool child nutritional requirement.
School going child (6-12 yrs) – Feeding problems of children and their nutritional requirements.
Adolescents – Nutritional problem of adolescent and nutritional requirements.
Adulthood - reference Indian Man and Women, Nutritional requirements.
Old age – Problems of old age, nutritional requirements

Unit IV - Menu Planning:
Explanation of terms, planning diets, the food guide Pyramid-My Pyramid, Nutritional requirement of adults, food security.
The Above plus the application of the above with respect to any five of the above categories.

Reference:
-Ghosh –S, Feeding and care of young infants and young children.
-Dietary allowances for Indians –ICMR
-Nutrition during pregnancy and lactation (WHO)
-Infant Nutrition in tropics and sub tropics by DB jelliffe(WHO)
-Human Nutrition and dietetics – Passmore and Eastwood.
-Normal and Therapeutic nutrition, Robinson and Lawler.
-Nutrition – Chouny Ross.
CBCS
B.Sc. V Semester
Diet Therapy

Code : HMB-562
Total M.M.: 200  (8 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional : 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To introduce basics of Therapeutic Nutrition.
To educate students about the latest methods of diet planning.

Theory:

Unit-I- Principles of diet therapy, general dietetic consideration, therapeutic modification of normal diet.
  Assessment of patients nutritional needs, Dietary counselling in patient care, - therapeutic Diets – clear fluid, full fluid, soft and refilter, mode of feeding.

Unit-II- Nutrition during febrile and Gastro-Intestinal disorders:
Etiology, clinical features, nutritional management of
  - Typhoid, Tuberculosis, Diarrhea, Constipation
  - Nutrition in liver
Etiology, clinical feature, nutritional management, diet and feeding pattern in:
  - Jaundice
  - Infective Hepatitis

Unit III - Nutrition in Metabolic disorders (DM and CHD).
Etiology, types, clinical features, Nutritional management, diet and feeding pattern in these diseases.

Unit IV - Nutrition in weight management
Etiology, clinical features, Nutritional management of diet and feeding pattern in weight management.
  a) - Overweight and obesity
      - Under weight
  b) : Sports Nutrition
      Energy System, Pre event meals, weight and body composition of athletes (Food requirement of all of these categories.)
Practical:

*Code:* HMB-5P2

*MM:* 100 marks (4 Credits)

*Continuous Evaluation:* 40 marks

*End-Semester Examination:* 60 marks

Planning, Calculation, Preparation, service and evaluation of diets for the patients suffering from the following diseases.

- Diets in fever: Typhoid and Tuberculosis
- Diets in GIT disorder: Diarrhea and constipation.
- Diet in Jaundice and Infective Hepatitis
- Diet in Hypertension and Atherosclerosis
- Diet in Diabetes mellitus
- Diet in obesity and under weight

Reference:

CBCS
B.Sc V Semester
RESIDENTIAL SPACE DESIGNING

Code : HMB-571
Total M.M.: 200 (8 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional : 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To understand the fundamentals of residential space planning,
To understand and develop the skills of drawing house plans and furniture layouts,
To incorporate legal considerations during space organization and designing.

Theory:
Unit I - Basic concepts of residential space:
Concept of housing and architecture
Types of houses: detached, semi-detached, row houses, flats/apartments, multi-storeyed buildings.
Housing needs: protective, economic, affectional, and social

Unit-II: Site selection and landscape planning:
Site selection: Factors influencing selection and purchase of site for house building, legal aspects,
Landscape planning: principles and application

Unit-III House Planning.
Planning different types of room: living room, dining room, bedroom, kitchen, store room, toilet, and staircase,
Essentials in House Planning-, Aspect, prospect, roominess, grouping, orientation, circulation, flexibility, privacy, spaciousness, services, aesthetics, economy, light, and ventilation

Unit IV: Housing Problems:
Housing condition in India, problems, causes and remedial measures, Disability of owning versus renting, Impact of housing on standard of living, cost and economy in construction (concept of modular housing)

References:
- Deshpande, R.S(1980) , Building your own Home , United Book Corporation
- Faulkner, S.(1977), Planning House
- Faulkner, S. (1977), Planning House

**Practical**

*Code:HMB-5P3*

*MM: 100 marks (4 Credits)*

*Continuous Evaluation: 40 marks*

*End-Semester Examination: 60 marks*

- Housing by-laws and symbols
- Observation of Residential structures/features of architecture: Foundations, columns, walls, slabs, floor, ceiling, window, door etc.
- Preparation of house plans for different income groups.
- Drawing House plans with standard specifications.

**References:**
CBCS
B.Sc. V Semester
Family Finance and Consumer Education

Code: HMB-572
Total M.M.: 100 (4 Credits)

**Theory**
MM: 100 marks
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

**Objectives:**
Educate the students about wise use of money.
To enable them understand the factors affecting financial decisions.

**Theory:**

**Unit I - Family as an Economic Unit:**
Family, meaning and definition, types of family in Indian society.
Family Income, Classification- money income, real income, psychic income.
Income in Indian Society.

**Unit II - Consumer Problems:** Types of markets – whole sale and retail, consumer problems:- quality of good, non availability, prices, lack of consumer information of goods, lack of retail services, insufficient labeling and packaging, defectives weight and measures. Social malpractices sound buying practices. Use of labels and quality marks-ISI, Agmark.

**Unit III - Factors Influencing Expenditure in Family:**
Engel’s Law, its factors affecting expenditure, size, composition, family value, social status, location of the family, economic goals of the family, resources in the family (Human and Non-Human), Family Life Cycle.

**Unit IV - Money Management:**
Budget: meaning, definition, advantages, limitations, methods of preparing budget.
Saving and investment: selection of saving agencies, types of saving institutions and facilities.
Banks- Type of Accounts.
Post Office Life.

**Reference:**
- Gross I.H. Crandall E.W. Management for modern families 1967, Sterling publishers(P)
CBCS
B.Sc V Semester
Community Development

Code : HMB-591
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To make students conscience about the problems of the community,
To make them active agents of community development and extension.

Unit I – Community Development programme:
Problems of community, Concept of Community work, classification of community work
and elements of community development.

Unit II – Process of community Development:
Objectives of Community development, philosophy and principles.

Unit III – Methods of Community development:
Extension education: Agricultural Extension, Veterinary extension, Home Science Extension.
Community Organisation- Rapport, Appraisal, Participation, Effective Communication, leadership.

Unit IV – Challenges of Community Development:
- Role of community worker, Similarities and differences between community
development and extension education.
- Limitations, scope and suggestions for improvement
- Youth organizations

References:
- Dahama, O.P and O.P Bhatnagar (latest edition), Education and Communication
- Manorama Year Book (latest)
  Private Ltd: Chandra, Arvind
CBCS
B.Sc VI Semester
Extension Programme Planning

Code: HMB-651
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To impart the knowledge of Programme planning among students.
To develop the concept of plan of work for rural issues.

Unit I –
Concept of Extension Programme
Components of Programme Planning
Principles used in Educational Planning.

Unit II –
Skill and abilities of programme planners
Concept of programme Projection.
Objectives of programme projection.

Unit III –
Definition and concept of plan of work
Elements of plan of work
Criteria for judging the plan of work

Unit IV –
Concept of Rural Agricultural Work Experience Programme (RAWE)

Reference:
- Extension, Communication and Management (1999) by Ray G.L.
- Education and Communication for Development (1985) by Dhama and Bhatnagar.
BCBS
B.Sc VI Semester
Foundation of Food Science

Code: HMB-661
Total M.M.: 200 (8 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To enhance the students understanding of the chemistry of food.

Theory:
Unit I - Definition and Scope of food Science and its interrelation with:
(i) Food Chemistry – Properties of solutions sols and Suspensions, Applications of colloidal chemistry to food preparation.
(ii) Food Microbiology – Microorganisms in food, factors responsible for food spoilage and chemical changes due to microbial spoilage, foods of microbial origin.

Unit II - Food Processing:
  i) Objectives of food preservation and processing.
  ii) Unit operations in food Industry.
  iii) Waste disposal and sanitation.
  iv) Packaging.

Unit III - Evaluation of food:
Factors influencing food acceptability and preferences, standards of food quality and acceptability.
  a) Sensory Assessment of food quality: Preference testing and reference testing.
  b) Rheological testing and instruments used for Rheological testing.

Unit IV - Chemical Processes in foods:
  a) Emulsions: Nature theory and types of emulsions, emulsifying agents factors affecting stability of emulsion, case of formation, some food emulsions.
  b) Pectins jellies and jams: Definition of jelly, jam and marmalade, pectin substance, composition and structure, theory of pectin gel formation, pectin tests. Control of Variables in fruit pectin jell, frozen desserts.
  a) Cereals flour batters and Doughs: Types of flour, structure of cereals flours and batters, types of flour factors affecting, structure and properties of batters and dough factors affecting hydration of gluten and cooking quality, Lavening agents.

Reference:
Practicals

Code: HMB-6P1
MM: 100 marks (4 Credits)
Continuous Evaluation: 40 marks
End-Semester Examination: 60 marks

- Factors affecting textural properties of batters and doughs.
- Pectin test and factors affecting the gel formation
- Preparation of emulsions using various emulsifiers, factors affecting stability of emulsions.
- Effect of heat and other factors on the smoking temperature of fat.
- Sugar Cookery.
- Demonstrations of gelatinization and dextrinization.
- Effect of acid, alkali, enzyme, heat, freezing on fruits and vegetables.

Reference:
CBCS
B.Sc VI Semester
COMMUNITY NUTRITION

Code: HMB-662
Total M.M.: 200 (8 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To enable the students to understand the existing nutritional problems in the community.
To develop skills about the way of combating the existing nutritional problems.

Theory:
Unit I - The Community:
Concept and definition of the community, characteristics of the community, concept and scope of community nutrition.

Unit II - Factors contributing to malnutrition in the community:
Agricultural production, influence of population, religion, socio cultural practices. Food adulteration: common food adulterants and their health hazards.

Unit III - Nutritional assessment and methods of identification of nutritional problem:

Unit IV - Measures to overcome malnutrition:
Meaning of nutrition education and its importance, organization of nutrition education programs in India. Role of National and International agencies in promoting nutrition education.

Reference:
- I.C.M.R. Technical report series
- Proceedings of Nutrition Society of India.
- Jelliffe D.B. Assessment of Nutrition status of the community “WHO monograph series No.53”.
- Publication series and course content, IGNOU New Delhi-17.
- Diet Atlas of India by C. Gopalan, S.C Subramaniam, ICMR Publication, New Delhi
Practicals

*Code:* HMB-6P2  
*MM:* 100 marks (4 Credits)  
*Continuous Evaluation:* 40 marks  
*End-Semester Examination:* 60 marks

**Practical**
- Study of prices of different food commodities.  
- Preparation of low cost nutritious food for  
  - Infancy, preschool, adolescence, pregnancy, lactation, geriatric.  
- Laboratory and home methods to check food adulteration.  
- Survey on Nutritional problems of any two, in Infancy, preschool, adolescence, pregnancy or lactation.
CBCS

B.Sc VI Semester

INTERIOR DECORATION AND HOME FURNISHING

Code: HMB-671
Total M.M.: 200 (8 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To understand the elements of arts & design as applied to interior space.
To understand and apply the fundamental principles of design & decoration for the interiors.

Theory:
Unit I – Introduction:
Definition and difference between interior decoration and design,
Importance of interior decoration and design in living and work environment,
Types of design: structural and decorative.

Unit II - Arts and Design fundamentals:
Elements of arts and design: line, shape, form, texture, space, light & color,
Principles of arts and design: Proportion, balance, harmony, rhythm and emphasis,
Objectives of interior decoration: beauty, expressiveness and functionalism.

Unit III - Color & its Application:
Color and its characteristics: hue, value, intensity
Effect of color, color systems and theories.

Unit IV - Interior Finishes and Furnishings:
Wall, floor, and ceilings finishes: materials and
Soft furnishings: curtains and draperies, slip covers, bed linen, table linen,
Cushions, pillows, and floor coverings etc,
Lighting and accessories: classification, selection and uses.

Reference:
- Ball Victoria Koss, 1982, Art of interior Design, John Wiley & Sons
**Practical:**

*Code:* HMB-6P3  
*MM:* 100 marks (4 Credits)  
*Continuous Evaluation:* 40 marks  
*End-Semester Examination:* 60 marks

- Catalogue Preparation-Sketching and drawing lines and forms  
- Color wheel, harmonious combination of color in different areas  
- Floor decoration.  
- A study of contemporary trends in lighting fixtures, accessories,  
- Table settings,  
- Flower arrangement.

**Reference:**

HOME ERGONOMICS

Theory

MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To create awareness about ergonomics in work simplification and efficiency,
To understand and apply ergonomic principles to creation of safer, healthier and more
effective activities in workplace.
To understand operational principles, use and care of household equipment.

Theory:

Unit I - Overview of Ergonomics:
Concept, importance and principles of ergonomics, scope of ergonomics in home and
other occupation.

UNIT II - Workplace Environment:
Concept of functional design and arrangement of workplaces: Centre concept, work
centers,
Heat, Noise and Insulation sound materials used and types of insulation, Vibration,
Lighting etc.

Unit III - Work Science:
Work organization: pattern of distribution, peak loads, leisure, dovetailing, elimination,
combining, delegation and supervision of tasks,
Work study: time and motion study and energy studies,
Work simplification: tools and techniques.

Unit IV - Household Equipments:
Household equipments: importance and classification, operational principles, use and
care.
Factors affecting selection of common household equipments,
Product design: Concept, functionalism and aesthetics,
Ergonomic considerations in designing products: kitchen tools and surface-cooking
utensils.

Reference:
  Graw Hill
- Dalela: Text book of work study
- Grendjea , E(1968): Fitting the task to the Man: A text book of occupational engineering
  London: Taylor and Francis (unit I-VIII)
- Gross I.H. Crandall E.W. Management for modern families 1967, sterling publishers (P)
  Ltd. Delhi
- Steidl and Bratton , Work in the home .
Code: HMB-6P4
MM: 100 marks (4 Credits)
Continuous Evaluation: 40 marks
End-Semester Examination: 60 marks

PRACTICAL

- Anthropometry
- Work surface heights
- Work simplification techniques.
- A study of the work centers in the kitchen.
- Kitchen planning.
- A comparative study of utensils (eg. saucepans, frying pans, cookers etc) and of accessory gadgets (eg knives, beaters, graters) analysis of their efficiency in use.
Correction
B.Sc VI Semester

Extension Programme Planning

Code:
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To impart the knowledge of programme planning among students.
To develop the concept of plan of work for rural issues.

Theory:
Unit I -
- Concept of Extension Programme
- Components of Programme Planning
- Principles used in Educational Planning

UNIT II –
- Skill and abilities of Programme Planners
- Concept of Programme Projection
- Objectives of Programme Projection

Unit III –
- Definition and concept of Plan of work
- Elements of Plan of work
- Criteria for judging the Plan of work

Unit IV –
- Concept of Rural Agricultural Work Experience Programme (RAWE).
- Definition and meaning of report writing
- Process of report writing

References:
- Extension, Communication and Management (1999) by Ray G.L.
- Education and Communication for Development (1985) by Dahama and Bhatnagar.
CBCS

B.Sc. III Semester

Process of Media and Communication

Code : HMB-
Total M.M.: 100 (4 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
Objectives:
To enable the students develop skills in use of methods of communication.
To enable them understand process of communication.

Theory:
Unit I - Introduction to communication:
Models of communication, elements of communication, nature of communication, mode of communication and their role in communication process.

Unit II - Sociology and psychology of communication:
Barrier of communication, types of communication, Communication process-Monologue or closed communication.

Unit III - Media for development communication:
Folk media- Song, Stories, Puppets, Games, Street theatre.
Print media- Posters, Charts, Pamphlets, Leaflets, newspapers, periodicals, articles, stories, songs, and books cartoons.
Audio visual media- Audiotapes, radio broadcasts, slides, pictures, drawings, photographs, videos, films- documentary and feature films.

Unit IV - Methods of communication in Development:
Interview, House visits, lectures, group discussions, role plays, personal conference, demonstration, workshops, newspapers, stories, posters, films, television programmes, letters, folders, pamphlets, public meetings

References:
-Manorama Year Book (latest)
-Rudramoorhty, B.(1964), Extension in planned Social Change, Allied Publishers Private Ltd:
CBCS
B.Sc. IV Semester
Extension Education

Code : HMB-
Total M.M.: 200 (8 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To enable the students to understand the process of extension in development process.
To teach extension as the grass roots level.

Theory:
Unit-I – Origin of extension
Meaning of extension and its origin,
History of Extension, principles, functions and objectives of extension.

Unit-II – Extension Models
Technology Innovation Transfer, Social Education, Indigenization, Social action, Empowerment.

Unit-III- Extension Education Process
Role of Educator, Role of People- Passive and Complacemnt, Feedback and evaluation in extension

Unit-IV – Non-Formal Education
Meaning, purpose of Non- Formal Education, schemes of Non-Formal Education, objectives and beneficiaries, Adult Education.

Practical

Code: HMB-4P2
**MM: 100 marks (4 Credits)**

*Continuous Evaluation: 20 marks*

*End-Semester Examination: 30 marks*

- Visit to Adult Education Centre
- Feedback and evaluation of an extension programme
- Fundamentals of displays and layout (Flash cards & Flip album).
- Preparation and evaluation of effective use of media and methods.
- Colours Schemes, Colour harmony, balance.
- Principles of layout.

**References:**
B.Sc 4 year

CBCS

B.Sc. II Semester

ESSENTIALS TO HOME SCIENCE-II

Code:
Total M.M.: 200 (6 Credits)

Theory
MM: 100 marks (4 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To make the students understand the basic concept of Nutrition,
To understand the basic concept of Human Development.

Theory:
Unit –I- Introduction to Food and Nutrition:
- Concept and definition of terms: Nutrition, malnutrition and under nutrition.
- Scope of Nutrition,
- Basic food groups and its importance in the diet.

Unit-II- Introduction to Human Development
Bases of growth and Development:
- Definition of growth and development
- Principles of Human Development
- Role of Heredity and environment in Development

Prenatal Development:
- Importance of conception
- Definition and Characteristics of prenatal periods.
- Hazards and Factors affecting prenatal periods.

Unit-III – Introduction to Resource Management:
- Definition and concepts of management
- Scope and principles of management
- Meaning and characteristics of resources
resources in the family- human and non- human
- Factors affecting utilization of resources.

**Unit-IV- Introduction Extension & Communication**
Concept of Extension Programme
Models of communication, elements of communication, nature of communication, mode of communication and their role in communication process.

**References**
Practical:

*Code:*

**MM: 100 marks (2 Credits)**

*Continuous Evaluation: 40 marks*

*End-Semester Examination: 60 marks*

- Survey of seasonal foods available in the market,
- Preparing food using different methods of cooking.
- List of Household equipments used and supplies in cleaning and maintaining resource management kit.
- Cleaning, care, maintenance and Polishing of: Iron, aluminium, copper, silver, brass, Ceramic and plastic.

**References**


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**CBCS**

**B.Sc. II Semester**

**Applied Physics and Chemistry**
Objectives:
To enable the students to:
Understand the principles of Physics and their application in household equipments.
Develop special skills in using and maintaining household equipments effectively.
To create awareness among the students about the judicious use of chemicals in day to day life.
To improve their knowledge of household chemistry.

Section A : Physics

Unit-I- 
- Measurements of Physical Quantities –Units and dimensions.
- Different types of motions , Laws of motions and examples .
- Gravity and Gravitation.
- Work , Power and Energy.

Unit-II
- Temperature and its measurements.
- Calorimetry , change of state with applications.
- Heat Transfer – modes and examples.

Unit-III -

Mechanics, Heat and Light:
- Properties of matter (Melting Point, Boiling Point, Density, Volume, Mass, conductivity, ductility etc.) their application to household equipments
- Simple machines: Scissors, eggbeaters, choppers, graters, holding tongs,
- Heat and its application to household equipments: pressure cooker, solar cooker, air cooler, air conditioner and refrigerator.
- Light and its application, colors: sources of color, spectrum.

Unit-IV – working principle of Appliances
Choice, care and working principle of
- Electric Mixers
- Electric kettles
- Irons
- Hair dryer
- Washing machine
- Water heater, and
- Toaster.
Section –B –Chemistry

Unit-I – Solutions
Types of solutions, different ways of expressing concentration of solution, colloids and its properties, types of colloids, colloids in daily life.

Unit-II-Acids, bases and salts
Concept of acids, base and salt, neutralization reaction, pH and Ph scale, buffer solutions, Applications in everyday life.

Unit III - Drugs and cosmetics:
- Basic concepts of Organic Chemistry,
- Simple drugs and medicines used in the home: headache remedies, pain relievers, laxatives, burn, remedies, household antiseptic and disinfectants, antibiotics, sulphur drugs.
- Elementary study of essential oils perfumes and flavors.
- Compositions, preparations and intelligent use of cosmetics: face products, creams, lipsticks, shampoos, depilatories.

Unit IV – Pesticides, rubbers and fuels:
- Pesticides and their judicious use in home, precautions to be observed while using them.
- Elementary study of high rubbers, elastomers and their application in daily living, fuels, calorific value, fire extinguisher suitable for home.

References:
3. Jacob T. (1979), Textbook of Applied Chemistry for Home Science and Allied Sciences, New Delhi, Macmillan Co

CBCS
B.Sc. II Semester

Human Physiology and Hygiene

Code: Human Physiology and Hygiene
Total M.M.: 100 (2 Credits)

Theory
MM: 100 marks (2 Credits)
Sessional: 10 marks
Mid-Semester Examination of one hour duration: 30
End-Semester Examination of two hours duration: 60 marks

Objectives:
To understand the common physiological process.
To understand the concept and importance of sanitation and hygiene.
To identify the hazards of environmental pollution.

Theory:

Unit-I Human Physiology and Hygiene
Human Body – Composition – cells, tissues, organs and systems- structure and functions; Physiology of digestion, respiration, circulation, reproduction and excretion, Homeostasis – role of hormones – maintenance of body temperature and acid base balance, body depend – immunity infection – prevention and control – sanitation and hygiene.

Unit II -
- Physiology of Menstruation,
- Physiology and psychology of pregnancy,
- Concept and stages of parturition,
- Physiology of lactation
- Composition and importance of breast milk

Unit III -
Causative agent, symptoms, mode of transmission, incubation period, control, care and prevention of
- Cholera, Typhoid and Dysentery
- Small pox, chickenpox, and measles
- AIDS and Hepatitis.
- Malaria and Dengue

Unit IV-
- Definitions of health, sanitation and hygiene,
- Elements of food sanitation and hygiene
- Methods of Refuse disposal

References:

Conceptual Psychology

Objectives:

To enhance the personality development capabilities.
To develop strategies to cope up with conflict and frustration.
To impart the knowledge of improving memory by suggesting suitable methods.

Unit-I Human Psychology

Definition and aims of psychology, scope of psychology and scientific roots, scientific study of animal and human behaviour normal and abnormal people, scientific study of individual difference –basis of individual differences, heredity- law of heredity and role of environment, heredity versus environment.
Unit II -
- Definition of psychology
- Scope of psychology
- Methods used in psychology: Experimental and survey methods.
- Definition of learning
- Factors affecting learning
- Theory of classical and operant conditioning

Unit III- Memory
- Definition of Memory
- Short and long term memory.
- Methods of measuring memory: Recall, Recognition, and Relearning.

Unit IV - Personality and Adjustment:
- Definition of personality
- Factors influencing personality
- Concept of adjustment, conflict, frustration
- Characteristics and Methods of Adjustment Mechanism

References