

**2015-2016**

**INTRODUCTION TO HOME SCIENCE-I**

*Code: HMB151*

*M.M.: 200 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:** To enable students to gain an understanding of:

- Home Science and its various branches.
- Basics of textile and clothing
- concept and functions of communication,

**Course Outcomes:** After completion of the course the students will be able to:

- Define nature, scope and role of Home Science Education.
- Explain scope, functions and elements of communication.
- Differentiate between fiber, yarn and fabric.
- Point out obstacles in studying human development.

**Theory:**

**Unit-I - Introduction to Home Science:**

- Concept and interdisciplinary nature of Home Science.
- Scope of Home Science, Historical background 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:**

- Etymology of textile
- 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**

1. Arvind chandra, 1978, *Introduction to Home Science*, Metropolitan Books.
2. A Team of Experts, (2005); *Modern UGC/NET/SLET, Home Science*, Anmol Publications Pvt. Ltd. New Delhi

3. Dahama, O.P and O.P Bhatnagar, (1985); *Education and Communication for development, 2<sup>nd</sup> edition*, Oxford and IBH Publishing House: New Delhi.
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,
6. I.H. and E.W. Crandall, (1967); *Management for Modern Families, India Reprint Edition*, Sterling Publishers Pvt. Ltd:Delhi
7. Mujibul Hasan Siddiqui, 2008, *Teaching of Home Science*,APH Publishing Cooperation..
8. Nickell , P. Ann Smith Rice and Suzanne P.Tucker; *Management in Family living :5<sup>th</sup> edition* , John Wiley and Sons.
9. Nickell , P.,and J.M. Dorsey, (1976); *Management in Family Living* , Wiley Easter Ltd: New Delhi.

### **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**

1. Arvind chandra ,1978,*Introduction to Home Science, Metropolitan Books.*
2. Dahama, O.P and O.P Bhatnagar, (1985); *Education and Communication for development, 2<sup>nd</sup> edition*, Oxford and IBH Publishing House: New Delhi.
3. Mujibul Hasan Siddiqui, 2008, *Teaching of Home Science*,APH Publishing Cooperation..

**Fundamentals of Physiology and Hygiene**

*Code : HMB-152*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:** To enable students to gain an understanding of:

- Common physiological process.
- The concept and importance of sanitation and hygiene.
- The common pollutant, its hazards and remedial measures of environmental pollution.

**Course Outcomes:**

After completion of the course the students will be able to:

- Define Physiology of menstruation.
- Explain Physiology & Psychology of Pregnancy & lactation
- Classify courses, symptoms & prevention of various diseases.
- Differentiate between air, water & Soil 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:**

1. C.S. Rao , (2006), *Environmental Pollution Control Engineering, II Edition, New Age - International.*
2. Gillian Pocock, Christopher D. Richards, David A. Richards, (2013), *Human Physiology, IV Edition, Oxford University Press*
3. Thomas E.,(2000) *Hand book of Hygiene , New Delhi, Silver Shore publications.*
4. kumud khanna.,(1997),*Textbook of Nutrition and Dietetics, Elite publishing house.*
5. Ann Fullick., (1998) *Human Health and Disease, Heinemann educational publishers*

**Fundamentals of Economics**

*Code :HMB-153*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks (4 Credits)*

**Course Objectives:** To enable students to gain an understanding of:

- Basic concept of economics.
- Importance and functions of money.
- Rights and responsibilities of consumers.

**Course Outcomes :**

After completion of the course the students shall be able to:

- Understand the concept of Economics.
- Define type of Economics & factors of production.
- Explain monetary system & its functions.
- Point out rights & responsibilities of 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:**

1. -Sherlekar , S.A.(1984): Trade Practices and consumerism , Himalaya Publishing house.
2. Kotler, Philip , Amstrong Gary (1992): Principles of Marketing , 5<sup>th</sup> edition Prentice hall of India , New Delhi.
3. Ruddardutt and Sundaram , K.P.M.,(1996): Indian Economy , 34<sup>th</sup> revised edition , S.Chand and company Ltd, New Delhi.
4. David H. Bhangs, Jr:The market planning Guide 3<sup>rd</sup> edn.Galgotra Publications.
5. I.C. Dhingra: Evolution of the Indian Economy; S. Chand and Sons.
6. Misra and puri: Indian Economy.
7. Paul A. Samuelson: Economics, Mc. Graw Hill Publishing Company Limited
8. Suraj B. Gupta: Monetary Economics: Institutions, Theory and Policy, S. Chand and Co., New Delhi.

**B. Sc. I Semester**

**Fundamentals of Psychology**

*Code: HMB154*

*M.M.: 100(4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:**

To enable the students to-

- Enhance the personality development capabilities.
- Develop strategies to cope up with conflict and frustration.
- Impart the knowledge of improving memory by suggesting suitable methods.

**Course Outcome :**

After completion of the course the students will be able to:

- Define Psychology and its scope.
- Explain theories and factors affecting learning.
- Differentiate between short and long term memory.
- Classify the methods of measuring memory.

**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

1. *Bangalore Kuppaswamy, (1991), Advanced Educational Psychology, Sterling Publishers*
2. *Morgan, C.T., King R.A., Weisz, J.R. & Schopler, J. (1995) Introduction to psychology, New Delhi: Tata McGraw-Hill Publishing Company Ltd.*
3. *Mangal, S.K. ,(2002), Advanced Educational Psychology, 2<sup>nd</sup> Ed, PHI Learning Private Limited, New Delhi .*
4. *S.S. Chauhan, (2007) Advanced Educational psychology, Vikas publishing house.*
5. *Spencer A. Rathus, (2007) Psychology: Concepts & Connections, Thompson Learning.*

**B.Sc. II Semester**

**INTRODUCTION TO HOME SCIENCE-II**

*Code :HMB 251*

*M.M.: 200 (6 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70marks*

**Course Objectives:**

To enable the students to-

- Make the students understand the basic concept of Nutrition,
- Make them aware about different methods of cooking along with merits and limitations
- Understand the basic concept of Human Development.

**Course Outcomes:**

After Completion of the course the students will be able to –

- Define the Nutrition and malnutrition.
- Explain food preparation and its purpose.
- Summarize the scope and principles of management.
- Classify the human and Non-human resources.
- Plan the cleaning and maintaining resources.

**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, bind, 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

1. *Basic Food Preparation (2001)*, by Department Of Food and Nutrition – Lady Irwin College – New Delhi. Paperback
2. *Berk, L.E. (1996): Child development, New Delhi prentice Hall*
3. *Craig, G. (1999) Human Development .N.J: Prentice hall.*
4. *Kumud Khanna, (2001), Textbook Of Nutrition, Phoenix Publishing House.*
5. *Mullick P., (2012), Textbook of Home Science, Kalyani Publishers.*

## 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

1. *Heinemann, (2002), Home economics in Action, by Caribbean Association Staff .*
2. *Mullick P., (2012), Textbook of Home Science, Kalyani Publishers.*
3. *S.Gupta, S.S. Sahay and S.Sharma (2009)Home Science, Saraswati House Pvt Ltd.*

**B.Sc. II Semester****Fundamentals of Biology**

*Code: HMB 252*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course 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.

**Course Outcomes:**

After completion of the course the students will be able to:

- Understand the Economic botany.
- Explain the principles of planning and cultivation.
- Analyze the fundamentals of Zoology.
- Differentiate between life history of human parasites and pests.

**Theory:****Section A: Fundamentals of Botany****Unit I - Economic Botany:**

Cultivation of Cotton Jute and Linen. Beverages-Tea and coffee. Spices: Coriander, turmeric. Vegetable Oils: Groundnut and mustard.

**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.
2. Dhama, P.S. (1987). *A textbook of Zoology*, Jalandhar, S. Nagia and Company
3. Inengar, Gopalswamy K.S. (1991) *complete gardening in India*, Banglore, Gopalswami Parthasarthy.
4. Kochar, S.L. (1981) *Economic Botany in Tropics, India*, Macmillan
5. Hartman Hand Kester, D.E. (1993), *plant propagation principles and practice*, New Delhi, Practice Hall of India Pvt. Ltd.

**B.Sc. II Semester**  
**Fundamentals of Physics and Fundamentals of Chemistry**

Code : HMB 253

M.M.: 100 (4 Credits)

**Theory**

MM: 100 marks (4 Credits)

Sessional: 30 marks

End-Semester Examination of two hours duration: 70 marks

**Course 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.
- Create awareness among the students about the judicious use of chemicals in day to day life.
- Improve their knowledge of household chemistry.

**Course Outcomes:**

After completion of the course the students will be able to:

- Define Mechanics of simple machine and applications of heat and light.
- Understand working principles of household appliances.
- Illustrate basic concepts of drugs and cosmetics.
- Explain the use of pesticides, rubber and fuel.

**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:**

1. *Patricia J. Murphy, (2002), Simple Machines , Rosen Publishing Group. New York.*
2. *Mullick P., (2012), Textbook of Home Science, Kalyani Publishers*
3. *Jacob T. (1979), Textbook of Applied Chemistry for Home Science and Allied Sciences, New Delhi, Macmillan Co.*

**B.Sc. II Semester**  
**Fundamentals of Sociology**

*Code : HMB 254*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two hours duration: 70 marks*

**Course Objectives:**

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

**Course Outcomes:**

After completion of the course the students will be able to:

- Define the meaning and scope of Sociology.
- Summarize the functions and types of marriage.
- Explain types of community.
- Differentiate between Social inequality, mobility and factors of social change.

**Theory:**

**Unit I - Introduction to Sociology:**

Definition, meaning, scope, and 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:**

1. -Descrochers, John(1984) , Classes in India Today, Banglore, India, Centre for Social Action.
2. Singh, K.(1980) : Principles of Sociology , Lucknow, Prakashan Kendra.
3. Alvinysso(1990) : Social change and development , Madras , Sage publications Pvt. Ltd.
4. Johnson M.Harry(1999) , Sociology :A systematic Introduction, New Delhi, Allied Publishers Ltd.
5. Zimerman C.Carle , Duwors E.Richard (1976) , Sociology of underdeveloped New Delhi Rawat Publications.



**B.Sc. III Semester**  
**Human Development - I**

*Code :HMB-351*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional : 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:** To enable students to gain an understanding of:

- Human Development and Family Studies with life span perspective.
- To enable the students adapt in social environment.

**Course Outcomes:**

After completion of the course the students will be able to:

- Define the principles of growth and development.
- Explain characteristics and hazards of prenatal period.
- Summarize the various aspects of development during Infancy, childhood & Adolescents.
- Understand Guilford model of intellect.

**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:**

- Gordon I.J.(1975): *Human Development*, New York : Harper and Row.
- Harris , A.C.(1986): *Child Development* , St. Paul : West Pub PP-5-17
- Saraswati , T.S and Kaur B(1993): *Human Development and family Studies* , New Delhi: Sage Publication.
- Srivastav , A.K.(1993): *Child and Adolescent Psychology: Seminar readings*, New Delhi.
- Berk, L.E.(1996): *Child development* , New Delhi prentice Hall
- Craig, G. (1999) *Human Development* .N.J: Prentice hall.

**B.Sc III semester****Fundamentals of Textiles**

*Code: HMB-352*

*M.M.: 200 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:** To enable students to gain an understanding of:

- Textile fibers in terms of their production and properties,
- To have hands on training in textile designing using surface design techniques.

**Course Outcomes:**

After completion of the course the students shall be able to:

- Define the meaning of meaning of textile fibre and their properties.
- Explain the processing of textile fibers.
- Classify the various Natural, man-made and synthetic fiber.
- Categorize the basic finishes and special finishes.
- Compare the surface design and woven design.
- Make up dye and printing 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

1. Corbman, P.B., (1989) *Textiles- Fibre to Fabric*, (6th Edition) New York, McGraw-Hill.
2. Joseph Marjoy, L. (1981): *Introductory textile Science*, New York Holt Rinehart and Winston.
3. Joseph, M. L. (1988), *Essentials of Textiles 5th edition*, Holt Rinehart and Winston, New York
4. Tortora , Phyl is (1978) : *Understanding Textiles*, Macmillan publishing Co, Inc.
5. Trotman, E.R (1984): *Dyeing and chemical technologies of textile fibres*, 6<sup>th</sup> edition, Charles Griffin and co. Ltd. London
6. Sekhri S., (2011) *Textbook of Fabric Science: Fundamentals to Finishing*, PHI Learning, Delhi

## Practical

*Code:HMB-3P1*

*MM: 100 marks (4 Credits)*

*Continuous Evaluation: 40 marks*

*End-Semester Examination: 60 marks*

Introduction to laundry process

**-Survey of Equipments and supplies\_-: Equipments:** washing machine, ironing board, Irons, **Supplies:** bleaches, soaps and detergents, optical brighteners, starches.

**-Dyes and printing techniques- Dyes:** Batik Dying ,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

1. Corbman, P.B., (1989) *Textiles- Fibre to Fabric*, (6th Edition) New York, McGraw-Hill.
2. Joseph Marjoy, L. (1981): *Introductory textile Science*, New York Holt Rinehart and Winston.
3. Mullick P.,(2012),*Textbook of Home Science*,Kalyani Publishers

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**B.Sc. III Semester**  
**Essentials of Human Nutrition**

*Code :HMB-353*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:** To enable students to gain an understanding of:

- Importance of nutrients in different stages of life & the concept of nutrition, sources and functions.
- To develop the skills of applying the learned knowledge of nutrition in day to day life.

**Course Outcome:**

After completion of the course the students will be able to:

- Define the functions of Proteins, carbohydrates and fats.
- Summarize the functions of micro-nutrients.
- Explain the various plant based food.
- Compare the plant based food and animal originated food.

**Theory:**

**Unit I - Proximate Principles:**

Classification, composition , digestion , functions , sources and effect of deficiency of carbohydrates, fats , proteins , supplementary value of protein.

Classification , functions , sources , effect of deficiency of vitamins and Minerals , relative availability of minerals , factors affecting destruction of vitamins, dietary fibers.

**Unit II - Food from plant and animal origin:**

- Beverage, Cereals, Pulses and legumes, Fruits and vegetables, Spices and condiments.
- Milk and milk products, Egg, Meat, fish, poultry,
- Miscellaneous foods:
- Fats, Nuts and Oils, Gelatin dishes, Novel Foods.

**Unit-III – Energy Requirements and Menu Planning :**

Factors affecting caloric requirement: BMR, soecific dynamic action of food , activity , age , climate , physiological condition , Methods of assessment of energy expenditure : direct and indirect methods , Diet planning , Food puramid and Food Security.

#### **Unit-IV- Nutritional requirements and nutritional problems**

- Of Infants , pre-schoolers , school-going children, adolescents , adults , old age persons , pregnant and lactating women,
- Lactation –Physiology of lactation , factors affecting lactation.
- Breast feeding vs artificial feeding , weaning and supplementary feeding of premature infant.
- Adulthood –reference Indian Man and Women.

#### **References:**

- Elizabeth Nash- Cooking Craft.
- Hughes O. and Bennion- Introductory foods
- Gopalan C, Ramasastria B.V., and S.C. Balasubramanium.
- Basic food preparation , Lady Irwin college.
- Mc devil M.E.,Mudambee S.R- Human Nutrition Principles and Applications in India.
- Rajalakshmi R. Applied Nutrition .
- Robinson C-Normal and Nurapeutic Nutrition
- Swaminathan M-Essentials of food and Nutrition Vol-I and Vol-I.

**B.Sc. IV Semester**  
**Human Development-II**

*Code: HMB-451*

*M.M.:100 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:** To enable students to gain an understanding of:

- Human development and importance of home environment, parent, teacher and peer relation in the overall personality development.
- To make them aware about individual difference and factors affecting creativity in children

**Course Outcomes:** After completion of the course the students will be able to:

- Define the concept of creativity.
- Explain the types of individual differences.
- Classify the various child rearing practices and their effects.
- Point out the role of Peer and parents during adolescents.
- Evaluate the theories of human development.
- Develop the importance of individual differences.

**Unit I – Creativity:**

Concept and definition of creativity.

Nature and characteristics of creativity

Taylor's 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, Kohlberg's Theory of moral development, cognitive theory of Piaget, Psychosocial theory of Erickson and Social learning theory of Bandura.

### **References:**

- Gorden I.J.(1975): Human Development, New York : Harper and Row.
- Harris , A.C.(1986): Child Development , St. Paul : West Pub PP-5-17
- Saraswati , T.S and Kaur B(1993): Human Development and family Studies , New Delhi: Stage Publication.
- Srivastav , A.K.(1993): Child and Adolescent Psychology: Seminar readings, New Delhi.
- Berk, L.E.(1996): Child development , New Delhi prentice Hall
- Craig, G. (1999) Human Development .N.J: Prentice hall.

### **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:**

- Gorden I.J.(1975): Human Development, New York : Harper and Row.
- Saraswati , T.S and Kaur B(1993): Human Development and family Studies , New Delhi: Stage Publication.



**B.Sc IV Semester**  
**CLOTHING CONSTRUCTION**

*Code :HMB-452*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 60 marks*

**Course 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.

**Course Outcomes:**

After completion of the course the students shall be able to:

- Summarize the techniques of fabric construction.
- Explain the principles of clothing construction.
- Point out the functions of clothing.
- Distinguish between types and techniques of stain.
- Compare the dry cleaning and wet cleaning.

**Theory:**

**UNIT I: Basics 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 and their function, 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:**

Stain removal: meaning and types.

Principles of laundry and dry cleaning: cleaning agent and their uses, comparison of dry cleaning with wet cleaning, advantages and disadvantages.

### **REFERENCES**

- Deulkar Durga (1976): Household textile and Laundering Work, 3rd edition, Atmaram and sons, Delhi.
- Doongaji S. (1975): Basic process and clothing construction, 4th edition, Rao Prakashan, New Delh
- Marshall S. G., Jackson, H.O., Stanley, M.S., Marshall et al M and Specht,(2004), Individuality in clothing selection & -- Personal appearance, 6th edition, Pearson Education, NJ
- Ling E.M. (1976): Modern household Science, Nille and Boom Ltd. London.
- Eve Borrett; (1967). How to become a “Professional” amateur dressmaker; A. Wheaton and Co; Ltd, Exeter.

**B.Sc. IV Semester**  
**Process of Media and Communication**

*Code :HMB-453*

*M.M.: 100 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 60 marks*

**Course Objectives:**

To enable the students develop skills in use of methods of communication.

To enable them understand process of communication.

**Course Outcomes:** After completion of the course the students will be able to:

- Define the term communication and its process.
- Explain the sociology and psychology of communication.
- Differentiate folk media and print media.
- Categorize the methods of communication in development.
- Design the colour schemes and colour harmony.

**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:**

- Dahama , O.P and O.P Bhatnagar (latest edition ), Education and Communication for development , oxford and IBH Publishing House : New Delhi.
- 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:**

- Dahama , O.P and O.P Bhatnagar (latest edition ), Education and Communication for development , oxford and IBH Publishing House : New Delhi.
- Manorama Year Book (latest)
- Rudramoorhty , B.(1964), Extension in planned Social Change , Allied Publishers Private Ltd:  
Chandra, Arvind

**B.Sc. IV Semester**

**Essential of Resource Management**

*Code :HMB-454*

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

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:**

To make students aware of managerial functions in family and at work place.

To evaluate their effectiveness of management skills.

**Course Outcomes:**

After completion of the course the students will be able to :

- List out the importance of management.
- Explain the concept of family role in home management.
- Classify the family on the basis of income.
- Distinguish between tools and techniques of decision making.
- Analyze the motivation management and their types.

**Theory:**

**Unit I – Importance of Management:**

Meaning and concept of Management, 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:**

Steps of effective decision making process, 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.
- Chatterjee, S.S.(1982), An Introduction to management – It's Principles and Techniques, The World Press Pvt.Ltd:Calcutta.
- Deacon and Firebaugh (1975) Concept of Home Management , Houghton Miffia Company :USA
- Gross , I.H. and E.W. Crandall(1967), Management for Modern Families, India Reprint Edition , Sterling Publishres Pvt. Ltd:Delhi.
- 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
- Louise Jemson Peet, Marry Pickett, Mildred, G.Arnold , B.S.(1970)Household Equipments 6<sup>th</sup> Edition , John Wiley and Sons.
- Manchanda, S. Savitri Ramamurthy , Sushma Goel and Archna Kumar(199 Household Materials : Manual for care and ---Maintenance , Wheeler Publishing : New Delhi.
- Nickell , P. Ann Smith Rice ans Suzanne P.Tucker, Management in Family living :5<sup>th</sup> edition , John Wiley and Sons New York
- Nickell , P.,and J.M. Dorsey(1976), Management in Family Living , Wiley Easter Ltd: New Delhi.
- Rao, V.S.P amd P.S Narayana (2000 –reprint ). Principles and Practice Management , Konark Publishers Pvt. Ltd Delhi.

**B.Sc V Semester**  
**Child Welfare in India**

*Code :HMB-551*

*M.M.: 100 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional : 30 marks*

*End-Semester Examination of two & half hours duration:70 marks*

**Course 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.

**Course Outcomes:**

After completion of the course the students will be able to :

- Define the concept of child welfare.
- Summarize the organizations offering services to normal children .
- Explain the approach & guidelines for the implementation of national Plan (IYC)
- Point out the girl child labour and gender disparities.
- Compare the various policies for the welfare of children.

**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 care and institutional services for disabled children

Services for blind, deaf and mentally retarded children.

Services for working Child and street Child.

#### **References :**

-Choudhary D.Paul (1995) Child welfare / development Atma Rama and Sons Delhi.

-Tripathi S.N. and Pradhan P(2003) Girls child in India , Discovery Publishing House , New Delhi.

-Devi Laxmi (1998) Child and Family Welfare , Anmol Pubication Pvt. Ltd New Delhi.

-Barooah , P.P(1999) Hand book on child ,concept publishing house , New Delhi

-Bhanti Raj. (1989), Welfare of Women and Child, Himanshu publishing house Udaipur.

#### **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 :**

-Choudhary D.Paul (1995) Child welfare / development Atma Rama and Sons Delhi.

-Devi Laxmi (1998) Child and Family Welfare , Anmol Pubication Pvt. Ltd New Delhi.



**B.Sc V Semester**  
**Nutrition for the family**

*Code :HMB-561*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:** To enable students to gain an understanding of:

- Factors affecting caloric requirements and concept of Diet planning
- Nutritional requirements and consideration during the life cycle.

**Course Outcomes:**

After completion of the course the students will be able to:

- Define the factors affecting energy requirement.
- Understand the nutrition in periods of rapid growth and physiological development.
- Explain the importance of nutrition during the life span.
- Analyse the importance of diet plan and nutritional requirements.

**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 adaptation, 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.

-Shri Lakshmi. B., Dietitics, 6<sup>th</sup> Edition, 2011, New Age International Publishers, New Delhi.

**B.Sc. V Semester**  
**Diet Therapy**

*Code: HMB-562*

*M.M.:200 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional : 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:**

- To introduce basics of Therapeutic Nutrition. types of diet, mode of feeding
- To educate students about the latest methods of diet planning.

**Course Outcomes:**

After completion of the course the students will be able to:

- List out the principles of diet therapy.
- Explain the importance of nutrition during febrile and gastro-intestinal disorders.
- Point out the nutritional requirements during metabolic disorder (DM and CHD)
- Evaluate the nutritional requirements for weight management.
- Develop the diet planning for various diseases.

**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:**

-Bamji MS, Krishnaswamy K and Brahmam GNV (2009). Textbook of Human Nutrition, 3rd Edition. Oxford & IBH Publishing Co Pvt Ltd.

-Joshi SA. 2010. Nutrition & Dietetics. 3rd Edition. Tata McGraw- Hill Education Pvt. Ltd

-Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (1997). Textbook of Nutrition and Dietetics.

**B.Sc V Semester**  
**RESIDENTIAL SPACE DESIGNING**

*Code :HMB-571*

*M.M.:100 (8 Credits)*

**Theory**

MM: 100 marks (4 Credits)

*Sessional : 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course 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.

**Course Outcome :**

After completion of the course the students will be able to:

- Define the basic concepts of residential space.
- Explain the site selection and landscape planning.
- Differentiate various types of room and their functioning.
- Point out the essentials in house planning.
- Evaluate the housing condition in India.
- Prepare the house plan for differentiate income groups.

**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 amenities and utility.

**Unit-II: Site selection and landscape planning:**

Site selection: Factors influencing selection and purchase of site for house building, legal aspects, History of site planning.

Landscape planning: principles and application

**Unit-III House Planning .**

Planning different types of room: living room, dining room, bed room, kitchen, , toilet, and staircase,

Essentials in House Planning-,Aspect, prospect, roominess, grouping, orientation , circulation , flexibility , privacy, spaciousness, services, economy , light , and ventilation

**Unit IV: Housing Problems:**

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

**References:**

- Agan, Tessie(1986) The House Its Plan and use , J.B.Lippin cott Co: New York.
- Chudley , R.(1973) , Construction Technology(I), English Language book Society and Longman group Ltd.
- Conran , Terrance (1985), New House book , Guide Publications London.
- Deshpande , R.S(1980) , Building your own Home , United Book Corporation
- Deshpande , R.S(1980) , Modern Ideal Homes for India , 9<sup>th</sup> Edition , Smt R.S. Deshpande for Deshpande Publication Trust.
- Faulkner , S.(1977), Planning House
- Leach S. Del. Mary (1983) , Techniques of Interior Design Rendering and presentation Mc Graw Hill:New York
- Modak , N.V. and Amdekar V.N(1971) , Town and country Planning Housing Oreint Longman .
- Rangwala , S. (1974) Town Planning , Anand Character Book stall.
- Deshpande , R.S(1980) , Modern Ideal Homes for India , 9<sup>th</sup> Edition , Smt R.S. Deshpande for Deshpande Publication Trust.
- Faulkner , S.(1977), Planning House
- Leach S. Del. Mary (1983) , Techniques of Interior Design Rendering and presentation Mc Graw Hill:New York
- Modak , N.V. and Amdekar V.N(1971) , Town and country Planning Housing Oreint Longman .

**Practical**

*Code:HMB-5P3*

*MM: 100 marks (4 Credits)*

*Continuous Evaluation : 40 marks*

*End-Semester Examination: 60 marks*

**Practical**

- 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:**

- Agan, Tessie(1986) The House Its Plan and use , J.B.Lippin cott Co: New York.
- Rangwala , S. (1974) Town Planning , Anand Character Book stall.

## B.Sc. V Semester

**Family Finance and Consumer Education**

Code:HMB-572

M.M.: 100 (4 Credits)

**Theory**

MM: 100 marks

Sessional : 30 marks

End-Semester Examination of two & half hours duration: 70 marks

**Course Objectives:**

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

**Course Outcome** : After completion the course the students will be able to :

- Define the meaning and types of family in Indian society.
- Understand the problems of consumers
- Explain factors influencing expenditure in family.
- Analyse the money management.
- Compare different types of savings and investment.

**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:**

- Premanatly Seetharenan and Sethi Mohini “ Consumer” I Edition 2002, 2011, CBS Publishers Pvt. Ltd.
- Nickell P, Dorsey J.M, Management in family living 1976 , Wiley Eastern Ltd. New Delhi.
- Gross I.H. Crandall E.W. Management for modern families 1967, Sterling publishers(P)

**B.Sc V Semester**  
**Community Development**

*Code: HMB-591*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:**

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

**Course Outcome:** After completion of the course the students will be able to:

- Identify the problems of community.
- Classify the community work and elements of community.
- Explain the process of community development.
- Analyze the methods of community development.
- Point out the challenges of community development.

**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 for development , oxford and IBH Publishing House : New Delhi.
- Manorama Year Book (latest)
- Rudramoorhty , B.(1964), Extension in planned Social Change , Allied Publishers Private Ltd: Chandra, Arvind

**B.Sc VI Semester**  
**Extension Programme Planning**

*Code:HMB-651*

*M.M.: 100 (4 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks.*

**Course Objectives:**

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

**Course Outcome:**

- Define the concept of Extension programme
- Understand components and principles used in education planning.
- Explain the skills and abilities of programme planners.
- Analyse the elements of plan of work.
- Evaluate Rural Agricultural work

**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)  
Report writing: Meaning, Definition, Process.

**Reference:**

- Extension Programme Planning (1994) by A.S. Sandhi 1994
- Extension, Communication and Management (1999) by Ray G.L.
- Training for development (1990) by Lynten R.P and Pareek U.
- Education and Communication for Development (1985) by Dhama and Bhatnagar .

**B.Sc VI Semester**  
**Foundation of Food Science**

*Code:HMB-661*

*M.M.: 100 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course Objectives:**

To enhance the students understanding of the basic concept of food chemistry.

**Course Outcome:** After completion of the course the students will be able to understand:

- Define the concept and scope of food science.
- Explain the food processing.
- Analyse the factor influencing food preferences.
- Evaluate the standards of food quality and acceptability.
- Compare various chemical process in food.
- Demonstrate the process of gelatinization and dextrinization.

**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 , Leavening agents.

**Reference:**

- Experimental cookery, Belle lowe john Idua Wiley , Eastern and Sons Inc New York latest edition .
- Experimental study of foods-Ruth M. griseweld . Noughten and Milfin company Boston New York latest edition.
- Food Science – Norman N. Patter the A.V Publishing company latest edition .
- Food Science – by Helen Charley – The Zonal Press Co. New York .
- Foundations of food preparation by G.C Packlam III Ede Macmillan publishing Co. Inc New York.

**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:**

- Experimental cookery, Belle lowe john Idua Wiley , Eastern and Sons Inc New York latest edition .
- Experimental study of foods-Ruth M. griseweld . Noughten and Milfin company Boston New York latest edition.

**B.Sc VI Semester**  
**COMMUNITY NUTRITION**

*Code:HMB-662*

*M.M.: 100 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course 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.

**Course Outcome** : After completion of the course the students are able to :

- Define the concept and characteristics of community.
- Summarize the factors influencing to malnutrition.
- Explain the nutritional assessment and nutritional problems.
- Point out the role of National and International agencies.
- Plan the low cost nutritious food for various age groups.

**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:**

Techniques of dietary survey, anthropometric measurements, clinical examination and Bio-clinical assessment, Limitations and interpretation.

**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:**

- Rajalakshmi – R. Applied Nutrition, Oxford and IBH publishers 1981.
- I.C.M.R. Technical report series
- Proceedings of Nutrition Society of India.
- MC Laren S, Nutrition and the Community , John Wiley and Sons 1982.
- Jelliffe D.B. Assessment of Nutrition status of the community “WHO monograph series No.53”.
- Guthrie H.A. , Introductory Nutrition , 4<sup>th</sup> edition . The C.V. Mosley Company London 1979.
- 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.

**B.Sc VI Semester**

**INTERIOR DECORATION AND HOME FURNISHING**

*Code: HMB-671*

*M.M.: 200 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course 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.

**Course Outcome :** After completion of the course , the students will be able to :

- Define the interior decoration and design.
- Differentiate between interior decoration and design.
- Explain the elements of art and design.
- Summarize the principles of art and design.
- Evaluate the various interior finishes and furnishings.
- Prepare catalogue of various lines and forms.

**Theory:**

**Unit I – Introduction:**

Meaning and concept of 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

Types of color and their effects.

**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:**

- Rutt, Anna Hong 1948, Home Furnishing John Wiley, New York.
- Stepat-de Van, Dorothy , 1964, Introduction to Home Furnishing, Macmillian publication, New Delhi.
- Faulkner, Ray and Faulkner , Srah , 1996, Inside Todays home. Holt , Rinehart & Winston, New York.
- Craig , Hazel , Thompson & Rush 1969, Home with character Revised edition University Boon stall , Delhi.
- 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 formss
- 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:**

- Rutt, Anna Hong 1948, Home Furnishing John Wiley, New York.
- Faulkner, Ray and Faulkner , Srah , 1996, Inside Todays home. Holt , Rinehart & Winston, New York.
- Craig , Hazel , Thompson & Rush 1969, Home with character Revised edition University Boon stall , Delhi.



**B.Sc VI Semester**

**HOME ERGONOMICS**

*Code: HMB-672*

*M.M.: 200 (8 Credits)*

**Theory**

*MM: 100 marks (4 Credits)*

*Sessional: 30 marks*

*End-Semester Examination of two & half hours duration: 70 marks*

**Course 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.

**Course Outcome:** After completion of the course the students shall be able to :

- Define the concept and importance of ergonomics.
- Summarize the functional design and arrangement of workplaces.
- Explain work organization , work study and work simplification.
- Classify various household equipments
- Create work simplifications techniques.

**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:**

- Astrand , P.O. and Rodahl (1986) : Text book of work Physiology , new york , MC 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
- Hall, H. Richard (1986): Dimension of work , New Sage Publication .
- 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.

