

तार : विश्वविद्यालय  
Gram : UNIVERSITY



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बुन्देलखण्ड विश्वविद्यालय, झाँसी  
BUNDELKHAND UNIVERSITY, JHANSI

झाँसी (उ.प्र.) 284128

संदर्भ. BU/Ac/2022/17379-789

दिनांक 30/06/2022

The Minutes of Meeting of BOS

In reference to the BOS of department of .....  
..... / Institute of .. Home Science ..  
..... held on 30/06/2022 regarding the  
revision of syllabus in tune with CBCS/NEP-2020 and subsequent  
approval from Academic Council. This is to certify that the syllabus is  
100% revised.

*goh'*  
Registrar  
Bundelkhand University  
JHANSI

*Pratibha*  
HOD/Coordinator  
Bundelkhand University  
JHANSI

## Minutes of Board of Studies [Home Science]

A meeting of Board of Studies of Home Science was held on 30/06/2022 at 11am. The members of the committee were mentioned below-

1. Dr. Swati Bhadoria (Convenor )  
Arya Kanya Mahavidyalaya ,Jhansi
2. Mradulata Sonkar (Member)  
Rajkiya Mahila Mahavidyalaya, Hamirpur
3. Dr. Renu Singh(Member)  
Rajkiya Mahila Mahavidyalaya, Jhansi
4. Dr. Deepti Bhadoria (Member )  
Arya Kanya Mahavidyalaya ,Jhansi
5. Dr. Charanjeet kaur (External Expert)Online  
Gulmohar Building Patel Nagar Gwalior
6. Dr. Renu Shrama (External Expert) Online  
Rajkiya Mahila P.G. Autonomous College
7. Prof. R.K. Saini (Dean) ( Invited Member)  
Bundelkhand University, Jhansi
8. Dr. Pratibha Arya (Invited Member)  
Bundelkhand University Jhansi
9. Dr. Meenakshi Singh (Invited Member)  
Bundelkhand University, Jhansi
10. Dr. Meghna (Invited Member)  
Bundelkhand University, Jhansi

### **Minutes of the meeting**

A meeting was held on 30/06/2022 at 11: 30 am on discussion and implementation of syllabus of Home Science as per NEP 2020 by Hon'ble Vice Chancellor constituted committee. Under mentioned points were discussed-

1. M.A. (Home Science) syllabus as per NEP was approved.
2. Panel of experts of B.A. Ist sem., B.A. IInd sem. ,B.A.IIInd year, B.A. IIIrd year, M.A. (Ist sem and IInd sem) and M.A. (final year) was prepared.
3. Panel for practical Viva -voce examination was prepared.
4. Amendment in B.Sc Home Science syllabus according to C.B.C.S and NEP 2020 was done.
5. Amendment in M.Sc. Home Science (Food & Nutrition and Human Development & Family Studies) as per NEP 2020 was done.
6. Panel of experts of theory and practical examination of B.Sc. Home Science, M.Sc. Home Science (Food & Nutrition) and M.Sc. (Human Development & Family Studies) was prepared.



**Syllabus**  
**B.Sc Home Science**  
**Institute of Home Science**  
**Bundelkhand University ,Jhansi**

## **INTRODUCTION**

Home Science is a single discipline which equally empowers the individuals towards self reliance as well as academic enrichment. Its interdisciplinary nature makes it a unique discipline which has countless entrepreneurial avenues to its graduates and at the same time it helps them to develop as a professional contributing in national development. The students are encouraged to develop a scientific temper. All the five windows of opportunity that Home Science offers for its recipients are i.e. Food and Nutrition, Human Development and family Studies, Family Resource Management, Development Communication and Extension and Fabric and Apparel Sciences. In these course, the students learn the fundamental principles and foundations of all the five areas. They are expected to internalize the principle of a Home Scientist, that is, to give back to the community from which they draw, for sustainable development. This is a major contribution of Home Science in both developed and developing societies.

**The objectives of the present B.Sc. Home Science Program course:**

- To understand and appreciate the role of interdisciplinary sciences in the development and well- being of individuals, families and communities.
- To learn about the sciences and technologies that enhance quality the life of people
- To acquire professional and entrepreneurial skills for economic empowerment of the student in particular, and community in general.
- To develop professional skills in food, nutrition, textiles, housing, product making, extension communication and human development.
- To take science from the laboratory to the people.

### **PROGRAM SPECIFIC OUTCOME:**

- Understand and appreciate the role of interdisciplinary sciences in the development and well-being of individuals, families and communities
- Understand the sciences and technologies that enhance the quality of life of people
- Acquire professional and entrepreneurial skills for economic empowerment of self in particular, and community in general
- Develop professional skills in food, nutrition, textiles, housing, product making, extension communication and human development.
- Take science from the laboratory to the people
- Participate as knowledge disseminator for wholesome development of the society

**Institute Of Home Science**

**B.Sc Home Science**

<b>FIRST YEAR</b>				
<b>SEMESTER I</b>				
<b>Course</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Total Credits</b>
Major I [DSC 1]		Human Physiology	4	25
Major II [DSC 2]		Fundamental of Human Development	4	
		Practical 1	2	
		Practical 2	2	
Major III [DSE 1]		Elective	4	
		Practical 1	2	
Minor I [GE 1]		Elective	4	
Minor II [SEC 1]		Elective	3	
Minor III [VAC 1]		Food & Nutrition	Qualifying	
<b>SEMESTER II</b>				
Major I [DSC 3]		Fundamental of Family Resource Management	4	21
Major II [DSC 4]		Basic of Clothing Construction	4	
		Practical 3	2	
		Practical 4	2	
Major III [DSE 1]		Elective	4	
		Practical 2	2	
Minor II [SEC 2]		Elective	3	
Minor III [VAC 2]		First Aid & Health	Qualifying	
<b>Certificate in B.Sc Home Science</b>			<b>Total</b>	
<b>Second Year</b>				
<b>SEMESTER III</b>				
<b>Course</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>Total Credits</b>
Major I [DSC 5]		Nutritional Biochemistry	4	25
Major II [DSC 6]		Life Span Development	4	
		Practical 5	2	
		Practical 6	2	
Major III [DSE 1]		Elective	4	
		Practical 3	2	
Minor I [GE 2]		Elective	4	
Minor II [SEC 3]		Elective	3	
Minor III [VAC 3]		Human Values & Environment Studies	Qualifying	
<b>SEMESTER IV</b>				
Major I [DSC 7]		Household Equipment	4	21
Major II [DSC 8]		Traditional Textile of India	4	
		Practical 7	2	
		Practical 8	2	
Major III [DSE 1]		Elective 4	4	

		Practical 4	2	
Minor II [SEC 4]		Elective	3	
Minor III [VAC 4]		Physical Education & Yoga	Qualifying	
<b>Diploma in B.Sc Home Science</b>		<b>Total</b>	<b>92</b>	
<b>Third YEAR</b>				
<b>SEMESTER V</b>				
Course	Course Code	Course Title	Credits	Total Credits
<b>Major I &amp; II</b>				
DSC 9		Therapeutic Nutrition	4	20
DSC 10		Early childhood care and education	4	
DSC 11		Extension Communication	4	
		Practical 9	2	
		Practical 10	2	
		Industrial Training I	4	
VAC 5		Analytical ability & Digital awareness	Qualifying	
<b>SEMESTER VI</b>				
DSC 12		Theories of Human Development	4	20
DSC 13		Food Service Management	4	
DSC 14		Residential Space Design and Furnishing	4	
		Practical 13	2	
		Practical 14	2	
		Industrial Training I	4	
VAC 6		Communication Skill & Personality Development & Character Building	Qualifying	
<b>B.Sc. Home Science</b>		<b>Total</b>	<b>132</b>	



**FIRST YEAR  
SEMESTER 1  
MAJOR I [DSC 1]**

**10701- HUMAN PHYSIOLOGY**

**Course Outcome**

- Gain the basic knowledge of human anatomy and physiology.
- Define the main structures composing human body.
- Explains structure and functions of cells, tissues and organs ,systems of the human body
- Relates structure and functions of tissue.
- Provides excellent preparation for careers in the health professions and/or biomedical research.

**UNIT- I**

A) Introduction to Human body:

Organs, tissue and cell, cell structure, cellular organelles and their functions

B) Blood and Lymphatic System:

- Blood - Composition and functions.
- Plasma Protein -Composition and functions.
- Lymphatic system structure and function
- Structure and functions of lymph node and lymphatic ducts

**UNIT-II**

C) Cardiovascular system:

- Structure of heart, blood vessels (systemic, pulmonary, and portal)
- Cardiac cycle, cardiac output (Definition and factors affecting)
- Blood pressure (Definition and factors affecting)

D) Respiratory Physiology:

- General overview of the respiratory passage, structure and functions.
- Mechanism of internal and external respiration.
- Structure of lungs and its functions

E) Digestive system:

- Overview of the Gastrointestinal Tract, organization and functions.
- Structure and functions of: Stomach, Liver, Gallbladder, Pancreas

### **UNIT- III**

#### F) Excretory System:

- Structure and functions of kidney and nephrons

#### G) Endocrine System:

- Overview of endocrine system, feedback mechanism/cascade.
- Structure of main endocrine glands and their functions: Pituitary, Thyroid, Parathyroid, Adrenal Glands, sex and Pancreatic hormones

### **UNIT- IV**

#### H) Reproductive system:

- Structure and function of uterus and ovaries
- Physiology of menstruation and menopause

#### I) Nervous System

- Overview of organization of nervous system, different types, structure of neurons and nerve impulse transduction

### **RECOMMENDED READINGS**

- Ganong WF (2014). Review of Medical Physiology, 24th ed. McGraw Hill.
- Ross and Wilson (2013). Anatomy and Physiology in health and illness, 11th ed. Medical Division of Longman Group Ltd.
- Guyton, A.C. and Hall, J.E.(2000)Textbook of Medical Physiology.10th ed. India: Harcourt Asia
- Das, A.(2004)Medical Physiology-Vol. I and II 3rd Books and Allied (P) Ltd.
- Mahapatra, A.B.S.(2003):Essentials of Medical Physiology.3rd Edition. Current Books International.
- D Venkatesh et al. (2020). Text Book of Medical Physiology 3<sup>rd</sup> edition. Wolters Kluwer.

## **100703 - PRACTICAL**

- Determination of pulse rate in resting condition and after exercise (30 beats/10 beats method)
- Determination of blood pressure by Sphygmomanometer (Auscultator method).
- Measurement of Peak Expiratory flow rate.
- Detection of Blood group (Slide method).
- Measurement of Haemoglobin level (Sahli's or Drabkin method).

## **MAJOR II [DSC 2]**

### **10702 - FUNDAMENTALS OF HUMAN DEVELOPMENT**

#### **Course Outcome:**

- Get insight of meaning, domains and the multidisciplinary nature of human development.
- Develop basic understanding of development from conception to old age.
- Understand theoretical perspectives in human development.
- Identify the principles guiding growth and development.
- Comprehend different methods to study development in children.

#### **UNIT- I**

##### A) Understanding Human Development

- Definitions, scope and multidisciplinary nature of Human Development
- Contexts, stages and domains of development

#### **UNIT-II**

##### B) Historical perspective of human development

##### C) Methods of child study

#### **UNIT- III**

##### D) Principles of Growth and Development:

- Norms and Milestones
- Role of environment and inheritance in development

#### **UNIT-IV**

##### E) Prenatal development:

- Three stages of intra-uterine development and stages of birth process
- Prenatal influence on the fetus, biological risks, age of mother, illness,
- Diet and nutrition, stress and emotional strain,
- Environmental hazard

#### **RECOMMENDED READINGS**

- Santrock, J. W. (2011). Life-span development. New York: McGraw-Hill.
- Singh, A. (Ed.) 2015. Foundations of Human Development. New Delhi: Tata McGraw- Hill.
- Berk, L. (2013). Child development. 9th ed. Boston: Pearson.

## **100704 PRACTICAL**

- Interviewing mothers of infants to conduct a survey of feeding and weaning practices.
- Taking heights and weights of Infants and pre-school children.
- Observation of Infants and children for stages of language development and speech analysis.
- Visit to Bal Bhawan and other institutions of child welfare
- Preparing a report of these visits.

## **SEMESTER-II**

### **MAJOR I [DSC 3]**

#### **10706 - FUNDAMENTALS OF FAMILY RESOURCE MANAGEMENT**

##### **Course Outcome:**

- Comprehend the fundamentals of resource management in changing scenario
- Familiarize the students with the available resources, their uses and conservation
- Enable the students to utilize resources in a prudent manner
- Understand the processes of management in a scientific manner in the use of resources.

##### **UNIT-I**

###### A) Introduction to management:

- Basic concepts of management
- Purpose of Management
- Obstacles to the improvement of management
  - i) Lack of awareness of management
  - ii) Lack of awareness of resources
  - iii) Failure to evaluate result of management
  - iv) Lack of information
  - v) Seeking readymade answer to problems

##### **UNIT-II**

###### B) Management Process:

- planning
- controlling
- evaluation

###### C) Factors motivating management

- Goal-definition, types and utility
- Values- importance, sources of values, classifications, characteristic, changing values
- Standards-definition, classification

##### **UNIT-III**

###### D) Decision Making

- Role of decision making in management
- Steps in decision making

###### E) Resources in the family:

- Classification

- Factors affecting the use of resources
- The family life cycle

#### **UNIT-IV**

##### **F) Money Management:**

- Family income
- Expenditure
- Family budget
- Savings

##### **G) Time management:**

- Importance
- Tools in time management
- Process

#### **RECOMMENDED READINGS**

- Patni, M. & Sharma, L. Home Management, Star Publication, Agra.
- Chatterjee, R. (2017), Home Management, V&S Publishers, Delhi.
- Vargese: Introduction to Home Management
- Arora, Aashima & Kapoor, H. (2012), Home Management, Bio-Green.

## **100708 PRACTICAL**

- Preparation of budget for families in different income groups, and needs.
- Preparation of colour wheel and colour scheme
- Resource optimization with reference to time, money, products, space, and natural resources



# MAJOR II [DSC 4]

## 10707 -BASICS OF CLOTHING CONSTRUCTION

### Course Outcome:

- Understanding fundamentals of Clothing Construction
- Learning terms and terminologies used in clothing construction
- Ability development selection of fabrics
- Acquiring practical knowledge about construction of some basic garments

### UNIT- I

#### A) Definition and Classification of textile fibres.

- History, manufacture, properties (chemical, physical and microscopic) and importance of following textile fibres:
- Natural Fibers:
  - Protein: wool, silk
  - Cellulose : cotton, linen
  - Mineral : Asbestos

### UNIT-II

#### B) Man-made/Synthetic Fibres:

- Cellulose: Rayon
- Polyamide : Nylon
- Polyester, Acrylic and Modacrylic ,Olefin ,Elastomeric
- Mineral: Glass,Metallic

#### C) Yarn: definition and basic concept of:

- Yarn construction Process : Mechanical spinning, Chemical Spinning
- Type of yarn : Staple yarns ,Filament yarns ,Simple Yarn ,Complex yarns
- Properties of yarns:
  - Yarn numbering system-count, denier, Tex
  - Twists in yarns :Textured yarns ,Fibre blends

### UNIT- III

#### D) Arranging Stitching area

- Equipment: equipment and supplies used in clothing construction, their maintenance, problems faced, remedies with specific reference to sewing machine.
- Basic terminology used in clothing construction

E) General principles of clothing construction,

- Selection of Fabrics, understanding width and right side of fabric, Grainline

#### **UNIT- IV**

F) Body measurement for different types of garments,

- Preparation of fabrics for garment making, laying out of pattern, marking and cutting of different types of fabrics (like checks, floral prints, pile etc)
- Interfacing, lining and interlining
- Pressing while stitching

#### **UNIT- V**

G) Simple stitches seams, necklines pockets, Fastners used in clothing construction

- Fullness, gathers , tucks
- Finishing of raw edges and disposal of fullness in clothing construction

#### **UNIT- VI**

H) Especial considerations for sewing for babies and children

- Household Linen: Importance, factors affecting selection of various household linen, care and maintenance
- Mending and renovation

#### **RECOMMENDED READINGS:**

- Janace E. Bubonia. (2012), Apparel production terms and processes, Fairchild Books, New York.
- Anna Jacob: Art of Sewing UBSPD, New Delhi
- Bane A –Tailoring, Mc Graw Hill Publication• Patni, M. (2016), Introduction to textile & clothing, Star Publication,Agra.
- Shoben, M.M. & Ward, J.P. (2021), Pattern cutting and making up, CBS Publication.
- Verma, G. (2021), fashion Design and Technology,CompuTech Publication.
- Janace E. Bubonia. (2012), Apparel production terms and processes, Fairchild Books, New York.

## **100709- PRACTICAL**

- Study of general physical properties of fibers
- Fibre identification: Identification of natural and manmade fibers appearance microscopic test, burning test and solubility test.
- Study of effect of various acids ,alkalis ,sunlight ,laundry substances (soaps and detergents, bleaches) on fibres
- Collection and study of various types of Yarns.
- Study of S twist and Z twist
- Preparation of various types of weaves with material
- Collection and preparation of resource book of samples of weave
- Sewing machine and its parts, common defects and remedy for them, equipment used for clothing construction.
- Sewing techniques: basic stitches, seams, fullness, gathers, pockets, tucks, Fasteners in common use, their application to the garments given below:
- Drafting of child's basic bodies block.
- Garments construction:
  - Drafting, cutting and stitching of simple garments such as:
  - Bib, A-line dress, apron and petticoat

# SECOND YEAR SEMESTER III MAJOR I [DSC5]

## 20701-NUTRITIONAL BIOCHEMISTRY

### Course Outcome

- To study the bio-molecules present in biological system of energy metabolism and its nutritional aspects
- To study the chemical/biochemical properties of carbohydrates, lipids, and proteins
- To study the functional role of proteins as enzymes and biocatalysts.
- To examine the functional role of vitamins and minerals.
- To understand the research techniques used in basic biochemistry and nutritional biochemistry research.
- To evaluate and criticize the experimental approaches and scientific information presented in the research articles related to nutritional biochemistry.

### UNIT I

#### A) Introduction to Biochemistry

- Definition, objectives, scope and inter-relationship between biochemistry and other biological sciences

#### B) Carbohydrates

- Definitions, classification, structure and general properties of:
- Monosaccharides-glucose, fructose, galactose, ribose
- Disaccharides – maltose, lactose, sucrose
- Polysaccharides – dextrin, starch, glycogen
- Carbohydrate metabolism, glycolysis, gluconeogenesis, glycogenesis, glycogenolysis, blood sugar regulation
- Inborn errors of metabolism

### UNIT II

#### C) Lipids

- Definitions and classification of lipids
- Types and properties of fatty acids
- Composition and properties of fats
- Significance of acid value, iodine value and saponification value
- Oxidation and biosynthesis of fatty acids
- Ketone bodies and ketosis & significance of cholesterol

#### D) Proteins

- Definition, classification, structure and properties of amino acids

- Essential and non-essential amino acids
- Definition, classification, elementary knowledge of structure of proteins
- Protein metabolism , Transamination, deamination, carboxylation, Urea cycle

### **UNIT III**

#### **E) Vitamins - Structure and biochemical role:**

- Fat soluble vitamins – A, D
- Water soluble vitamins – B1, B2, niacin, pyridoxine, folic acid, B12 and C
- Functions, dietary sources and clinical manifestations of deficiency/ excess of the following nutrients:
  - Water soluble vitamins B & C
  - Fat soluble vitamins-A, D, E and K

### **UNIT IV**

#### **F) Minerals**

- Biological role and occurrence of inorganic elements – iron, calcium, phosphorous, iodine, selenium and zinc
- Functions, dietary sources and clinical manifestations of deficiency/ excess of the following nutrients:  
Calcium, Iron, Phosphorus, Iodine, Selenium & Zinc

#### **G) Enzymes**

- Introduction to Enzymes, Classification and properties of Enzymes, Co-enzymes, Enzyme Inhibition
- Water, electrolyte and acid base balance

### **RECOMMENDED READINGS**

- Nutrition Requirements and Recommended Dietary Allowance for Indian, New Delhi.
- FAO/WHO/UNO- Technical Report-Series 724 (1985) Energy and Protein Requirement Geneva.
- Lehninger A L, Nelson D L and Cox M M (2009). Principles of Biochemistry, 6th Ed. CBS Publishers and Distributors.
- Harbans Lal. (2021-22). Textbook of Applied Biochemistry and Nutrition & dietetics. CBS Publication & Distribution PvtLtd.
- Lehninger A L, Nelson D L and Cox M M (2009). Principles of Biochemistry, 6th Ed.

## **200703 –PRACTICAL**

- Tests of mono, di and polysaccharides and their identification in unknown mixtures
- Qualitative Tests for reducing and non-reducing sugars in foods
- Determination of acid value, saponification and iodine number of natural fats and oils
- Reactions of amino acids and their identification in unknown mixtures
- Estimation of ascorbic acid content of foods by titrimetric method

# MAJOR II [DSC 6]

## 20702-LIFE SPAN DEVELOPMENT

### Course Outcome

- Develop an understanding about the need and importance of studying human growth and development across life span
- Learn about the biological and environmental factors that affect development
- Learn about the characteristics, needs and developmental tasks of different stages in the human life cycle
- Understand the different theoretical frameworks fundamental to HDFS
- Learn about the classic human development theories
- Develop professional attitude for working with human beings across life span

### UNIT-I

#### A) Physical Development across life span

- The new born physical appearance, size, weight, bodily proportion, sensory capacities i.e. hearing, vision, touch etc.
- Changes in size, shape, bone and brain as it continues through infancy , preschool, childhood, adolescent growth spurt(primary and secondary sexual characteristics, Plateau in adulthood, decreasing physical abilities in old age

#### B) Motor Development

- Reflexes in infancy, major milestones of infancy, pre-school years, middle and late childhood, adolescent plateau in adulthood, declining co-ordination in adulthood and age
- Factors affecting Physical and motor development

### UNIT-II

#### C) Social Development:

- Social development and socialization as an important part of the process becoming human
- Social milestones; beginning with the emergence of the social smiles, attachments, separation anxiety acquiring sex roles in childhood, social development at puberty, induction into occupational roles by adulthood, social isolation and consequences in the late adulthood and in the elderly

#### D) Emotional Development:

- Concepts of emotions and emotional development
- Basic emotional reactions, joy, fear, jealousy, anger, sadness, aggression
- Emotional Development through infancy, childhood, adolescence, stability of emotions in

adulthood and old age.

- Hazards in emotional Development

### **UNIT- III**

E) Cognitive Development across the life span:

- Meaning of cognitive Development:
- The concept of Intelligence.
- A brief Introduction in Piaget's theory and stages,

F) The Development of Language across the Life span.

- Language as a form of communication.
- Function of Language.
- Communicating before language development i.e. the stage of vocalization undifferentiated crying, differentiated babbling, initiation of sound, patterned speech.
- Beginning in use language. One or two word sentence, early sentences, telegraphic speech grammatical language development.
- Refinement of language through middle, late childhood and puberty,
- Decline of language in the aged (Speech impairment and disorders).

### **UNIT- IV**

G) Development of play:

- Play as means of development and learning.
- Development stage of play.
- Social dimension of play, unoccupied behaviour, onlooker behaviour, solitary play, parallel play, associative play and co-operative play.
- Play as a means of children's all round development.

H) Development of Creativity:

- Meaning of creativity
- Development of creativity
- Components of creativity
- Expression of creativity
- Factors affecting creativity

### **RECOMMENDED READINGS**

- Santrock, J. W. (2011). Life-span development. New York: McGraw-Hill.
- Singh, A. (Ed.) 2015. Foundations of Human Development. New Delhi: Tata McGraw- Hill.
- Berk, L. (2013). Child development. 9th ed. Boston: Pearson.



## **200703 - PRACTICAL**

- Observing children in different situations, recording the observations, analysing the observations and writing report
- Assessment of physical development of children
- Assessment of motor development of children: gross motor skills, fine motor skills
- Assessment of social behaviour
- Assessment of emotional maturity/ emotional quotient
- Plan and develop activities to facilitate development in different domains
- Prepare play materials and teaching aids for children

# SEMESTER IV

## MAJOR I [DSC 7]

### 20706- HOUSEHOLD EQUIPMENT

#### Course Outcome

- To learn the integration of physics and its application in the household equipment.
- To have a fair knowledge about the household Equipments, their selection and classification.
- To learn their Working Principles and maintenance.

#### UNIT-I

##### A) Mechanics:

- Simple Machine
- Lever

##### B) Forces: centripetal and centrifugal forces spin dryer in washing machine

##### C) Frictions:

- Advantages and disadvantages, concept of ball bearing in sewing machine & vacuum cleaner

##### D) Heat:

- Introduction to heat
- Application in heat transfer
- Refrigerator

##### E) Light

- Introduction to light
- Theories of light , reflection & refraction
- Colour-Sources of colour, responses of eye to colour

#### UNIT-II

##### F) Electricity:

- Basic electricity, units of electric measurements, Ohm's Law series and parallel connections

##### F) Effects of electricity-

- Fuse circuit breaker, thermostat, bimetallic and hydraulic automatic steam iron,
- Toaster, hot plate, water heater , water boiler

#### UNIT-III

##### G) Choice and care of motor driver appliances-

- Mixer, Blender, Hair dryer

- washing machine and dryer

#### **UNIT-IV**

H) Classification, selection, use and care of house hold equipment:

- Portable and Non-Portable
- Electrical and motor driven/ Non electrical
- Food Related
- Laundry: Washing machine
- Cleaning: Vacuum Cleaner
- Recreation
- Hair dryer

I) Certification and Guarantee

#### **RECOMMENDED READING:**

- Johnson J B ,Equipments for Modern Living: The McMillon Company
- Mohini Sethi: Catering Management An Integrated Approach, Wiley Eastern Ltd
- Poet L : Household Equipment New York,Wiley Eastern Ltd
- Vargese M A : Household Equipment Mannual Bombay, SNDT Womens University
- Jain,S.K. (2019), Electrical Home Appliances, Bhartiya Technical Publication.

#### **200708 PRACTICAL**

- Principle, use and care of Household Equipment - Pressure cooker, Toaster, Gas Stove, Mixer & Grinder, Refrigerator, Washing machine, Microwave
- Study of
  - Telephone Circuit.
  - Electric Bell 'Circuit.
- Staircase lighting - room lighting—cost of consumption.
- Repair of Heater and Iron.
- Comparative study of design and functional features in household equipment
  - Utensils- for cooking, serving and washing (4 experiments).

# MAJOR II [DSC 8]

## 20707- TRADITIONAL TEXTILE OF INDIA

### Course Outcome

- Appreciation of diverse and rich textiles heritage of India
- Learning about traditional embroideries from different parts of the country
- Comprehending about traditional textiles from different parts of the country
- Understanding role and significance of khadi
- Scientific knowledge about conservation of textiles

### UNIT-I

#### A) Dyed and printed textiles:

- Kalamkari (painted and block printed),
- Patola, bandhani (tie and dye) of Gujarat and Rajasthan.
- Ikat of Orissa

### UNIT-II

#### B) Woven textiles:

- Brocades of Uttar Pradesh
- Baluchar of West Bengal
- Brocades of South India
- Muslin of Bengal
- Shawls of Kashmir

### UNIT- III

#### C) Embroidered Textiles:

- Chikankari of Lucknow
- Phulkari of Punjab
- Kantha of Bengal
- Kashidakari of Kashmir
- Kasuti of Karnataka
- Zari embroidery
- Kutch and kathiawar.

### UNIT- IV

#### D) Status of traditional textiles in modern India:

- Evolution and socio economic significance of khadi, hand loom and handicrafts sector

- Intervention by organizations in sustenance of Indian textile craft

E) Conservation of textiles:

- Factors affecting deterioration of textiles,
- Care and storage of textiles

**RECOMMENDED READINGS:**

- Dar SN Costumes of India and Pakistan. Bombay D B Taraporewala sons & Co Pvt Ld
- Chattopadhyaya K D: Handicrafts of India Indian Council for Cultural Relations
- Dhamija & Jain: Handwoven Fabrics of India . Ahmedabad Mapin Publishing Pvt Ltd
- Bhatnagar P Traditional Indian Costumes & Textiles India Abhishek publications Chandigarh
- Naik, S. D. (2012), Traditional Embroideries of India, A.P.H Publication Corporation.

**200709 PRACTICAL**

- Embroidery stitches:
- Make samples of different types of stitches and prepare two consumers items using contemporary embroidery

# THIRD YEAR SEMESTER V MAJOR [DSC 9]

## 30701- THERAPEUTIC NUTRITION

### Course Outcome

- Knowledge of principles of diet therapy
- Understanding the various therapeutic modification of normal diet
- Ability to counsel the persons and individuals about dietary intakes and modifications

### UNIT-I

#### A) Introduction to Diet Therapy

- Basic concepts of diet therapy
- Therapeutic modifications of the normal diet
- Different methods of feeding
- Interaction between drugs and nutrients (in brief).

### UNIT-II

#### B) Common diseases/ disorders

- Etiology, clinical features and nutritional management of:
- Febrile disorders
- GIT disorder-ulcers, Diarrhoea, constipation, pancreatitis
- Underweight, overweight and obesity

### UNIT- III

#### C) Lifestyle disorders

Etiology, clinical features and nutritional management of:

- Diabetes, Cardiovascular disease
- Hypertension, Hypothyroidism

### UNIT-IV

#### D) Chronic diseases

Classification, etiology, symptoms and dietary management in:

- Stomach, liver and gallbladder diseases, Peptic Ulcer Gastritis, hepatitis, cholelithiasis
- Renal diseases: nephritis, nephrosis
- Arthritis, osteoporosis, and Gout.

## **RECOMMENDED READINGS**

- Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. Phoenix Publishing House Pvt. Ltd.
- ICMR (2020) Nutritive value of Indian Foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
- Advani, Tk.(2017), Nutrition & Therapeutic Diet, Jaypee brothers medical publisher
- Sharma, A. (2017), Principles of Therapeutic Nutrition And Dietetic, CBS.

## **300704 PRACTICAL**

- Planning and preparation of Soft, fluid and bland diets
- Planning and preparation of diets in-
  - i. Protein energy mal-nutrition
  - ii. Vitamin A deficiency
  - iii. Iron Deficiency Anaemia
- Overweight and underweight
- Fevers
- Constipation and Diarrhoea, ulcers
- Jaundice and other liver diseases
- Diabetes mellitus, Hypertension and coronary heart diseases,.
- Renal diseases



# MAJOR [DSC 10]

## 30702- EARLY CHILDHOOD CARE AND EDUCATION

### Course Outcome

- Explain the need and importance of studying childhood as a distinctive stage of the life-span.
- Describe the historical views and theories on childhood
- Describe the characteristics, needs and developmental tasks of infancy, early childhood
- Explain the importance of early childhood years and significance of intervention programs for early childhood development.

### UNIT-I

A) Significance and objectives of Early Childhood Care and Education.

- Significance of early childhood years in individual development.
- Need for intervention programmes for better growth and development.
- Objectives of ECCE.

B) Different types of programmes currently offered.

- ECE Programme- Balwadi, Anganwadi, Nursery Schools, Kindergarten, Montessori, Laboratory Nursery School.
- ECCE Programme- I.C.D.S. and Mobile Creche, Play Group, Crèche and Day Care.

### UNIT-II

C) Historical Overview of ECCE:

- View of Educationist and Philosophers - Comenius, Rousseau, Pestalozzi, Frobel, McMillan Sisters, Dewey and Montessori.
- Psychological- Recognition of Effect of experiences in early childhood years, opportunities for expression of anger, tension through creative activities and dramatic play for proper mental hygiene.
- Cognitive approach – Piaget's contribution to curriculum for cognitive development.

### UNIT-III

D) ECCE in India – Contribution of Rabindra Nath Tagore, Gandhiji, Tarabai Modak

- Recent Development: Policies, Institutions and contributions of NGOs

### UNIT-IV

E) Organization of ECCE Centre:

- Place/ Building/ Space - Indoor and Outdoor, garden, play-ground, Storage space.
- Furniture and equipment's: Criteria for selection, functional utility, maintenance, low cost alternative.
- Preparing equipment's lists for indoor and outdoor activities

**RECOMMENDED READINGS :**

- Agarwal, J. C. (2007). Early childhood care and education: principles and practices. New Delhi: Shipra
- Agarwal, S.P. and Usmani, M. (2000). Children's education in India: from vedic a. times to twenty first century New Delhi: Shipra.
- Canning, N. (2010) Play and practice in the early years: Foundation stage. New Delhi: Sage.
- Fler, M. (2010). Early learning and development: Cultural–historical concepts in play. Cambridge: Cambridge University Press.
- Agarwal, J.C & Gupta, S. (2019), Early Childhood Care and Education, Shipra Publication.

**300705 PRACTICAL**

- Collection of traditional stories and songs.
- Prepare picture book/story for infants and toddlers.
- Prepare play materials /play activities to promote different areas of development
- List the activities for each domain to promote all round development in young children
- Planning pre-reading and writing skills.
- Plan activities/materials to promote mathematical concepts and science experience. Visit, Observe and submit report of various activities/programmes conducted in crèches, balwadis/aganwadi and preparatory schools

# MAJOR [DSC 11]

## 30703 EXTENSION COMMUNICATION

### Course Outcome

- Develop understanding of scope and concepts of development communication.
- Comprehend the elements and process of effective communication
- Understanding about various communication methods and their use in community setting

### UNIT-I

#### A) Concept of Extension:

- Meaning , philosophy and Origin of extension
- Principles, scope, limitations and role of extension education

### UNIT-II

#### B) Extension worker

- Qualities , Training and Role of extension worker

### UNIT- III

#### C) Concept of development communication.

- Meaning and importance of communication in development,
- purpose of communication
- Existing patterns of communication.
- Factors that helps or hinders communication.

### UNIT- IV

#### D) Methods of communication in development methods to reach individuals

- Personal contact: Interview ,House visits, Clinics to solve individual problems
- Methods to reach small groups: Illustrated lectures, Group discussions, Role play, Demonstration, Camps
- Methods to reach masses: Radio programs, Newspaper, Posters , Exhibits, Videos, Films, T.V. Programme, Letters ,Folders, Pamphlets, Public meetings
- Selection, preparations, use and evaluation of the above methods

## **UNIT- V**

### **E) Media for Development communication: ,**

- Folk media, Games, Puppet, play Print media, Newspapers – articles, stories
- Audios/visuals, audio-visual media
- Films: documentary, features
- Selection, preparation and effective use of media in development education and evaluation of the effectiveness of the media

## **UNIT - VI**

### **F) Home Science Education as Empowerment**

- The interdisciplinary of Home science education
- The role of Home Science education for personal growth and professional development, National Development

### **RECOMMENDED READINGS:**

- Reddy A : Extension Education, Bapatia, India, Sri Laxmi Press
- WHO- Education for Health
- Gorges, Alan Teaching Adults in Extension Education
- Dhama OP &Bhatnagar OP: Education and Communication for Development

# SEMESTER VI MAJOR [DSC 12]

## 30706 - THEORIES OF HUMAN DEVELOPMENT

### Course Outcome

- Apply the theoretical approaches to work with human being across life span
- Learn about the classic human development theories
- Develop professional attitude for working with human beings across life span
- Explain the need and importance of studying human growth and development across life span.
- Identify the biological and environmental factors affecting human development.

### UNIT-I

A) Early views on human development:

- Western and Indian Perspective of Human Development
- Psychosexual Development Theory of Personality – Sigmund Freud
- Psychosocial Theory – Erik Erikson

### UNIT-II

B) Social Learning Theory – Albert Bandura

C) Learning Theories – Watson, Pavlov and Skinner

### UNIT-III

D) Cognitive Development Theory – Jean Piaget

E) Socio-Cultural theory of Cognitive Development – Vygotsky

### UNIT-IV

H) Kohlberg's Moral Judgement Theory

I) Ecological Theory – Urie Bronfenbrenner

### RECOMMENDED READINGS:

- Bhangaokar, R., & Kapadia, S. (in press). Human Development Research in India: A historical overview. In G. Misra (Ed.), Hundred years of Psychology in India. New Delhi: Springer.
- Feldman, R., & Babu, N. (2009). Discovering the life span. New Delhi: Pearson
- Newman, B.M. (2015), Theories of Human Development, Psychology Press



# MAJOR [DSC 13]

## 30707- FOOD SERVICE MANAGEMENT

### Course Outcome

- Knowledge of type of food services in INDIA
- Understanding characteristics of various food service outlets
- Analysis of various resources required for food service establishments

### UNIT- I

#### A) Introduction to Food Service

- Factors contributing to the growth of food service industry
- Kinds of food service establishments

### UNIT -II

#### B) Food Production

- Menu planning: Importance of menu, Factors affecting menu planning, Menu planning for different kinds of food service units
- Food Purchase and Storage
- Quantity Food production: Standardization of recipes, quantity food preparation techniques, recipe adjustments and portion control
- Hygiene and Sanitation

### UNIT- III

#### C) Resources

- Money
- Manpower
- Time
- Facilities and equipment
- Utilities

### UNIT- IV

#### D) Planning of a Food Service Unit

##### •Preliminary Planning

##### •Planning the set up:

- Identifying resources
- Developing Project plan
- Determining investments
- Project Proposal

#### E) Survey of types of units, identifying clientele, menu, operations and delivery

### **RECOMMENDED READINGS**

- West B Bessie & Wood Levelle (1988) Food Service in Institutions 6th Edition Revised ByHargar FV, Shuggart SG, &Palgne Palacio June, Macmillian Publishing Company New York.
- SethiMohini (2005) Institution Food Management New Age International Publishers
- Palacio, P. & Thesis, M. (2019), Food Service Management, Pearson Education.

### **300709 PRACTICAL**

- Analyse the relationship between the purchased amount, edible portion and cooked weight of food stuffs.
- Visit to a Food service Establishments to study its planning and functioning.
- Cost analysis of menu.



# MAJOR [DSC 14]

## 30708 - RESIDENTIAL SPACE DESIGN AND FURNISHING

### Course Outcome

- Understand the various features in period style furniture
- Select and arrange furniture and furnishings in different rooms in residential spaces
- Knowledge on factors influencing planning of life space
- Develop confidence in decorating interiors using furniture and furnishings

### UNIT- I

#### B) Family housing needs –

- Protective, economic, affectionate,
- Standard of living, housing goals, function

#### C) Factors influencing selective and purchase of site for house building:

- Legal aspects, location,
- Physical features, soil condition, services, housing Cost

### UNIT-II

#### D) Housing

- Principles of house planning – grouping, orientation, circulation, flexibility, privacy, spaciousness, aesthetics, economy, light and ventilation.
- Planning different residential spaces: entrance, living rooms, drawing rooms, bedrooms, store rooms, study rooms, bath room

### UNIT- III

#### E) Kitchen planning –

- Types of kitchen, planning different work areas in the kitchen.

#### F) Furniture:

- Types of furniture.
- Selection of furniture.

### UNIT-IV

#### G)Furnishing:

- Factors affecting furnishing choices.
- Soft furnishing – selection and care of bed linen, table linen

- Curtains and draperies: type, selection and care.
- Floor covering, rugs and carpets. Types, care and cleaning.

#### **RECOMMENDED READINGS:**

- Arora. S. P., and Bindra S.P. (2005). *Building Construction*. Delhi: DhanpatRai Publications
- Bhavikatti, S.S., and Chitawadagi, M.V. (2019). (1<sup>st</sup> Ed.). *Building Planning and Drawing*. Hubli: Dreamtech Press
- Faulkner, R. and Faulkner, S. (1987). *Inside Today's Home*. New York: Rinehart Winston, India.
- Gandotra V., Shukul M., and Jaiswal N. (2011). *Introduction to Interior Design and Decoration*, New Delhi: Dominant publishers, India.
- Jankowsky, W.(2001). *Modern Kitchen Work Book*. New Delhi: Rockport Publishers, India.

### **300710 PRACTICAL**

- Residential space planning – scale, lines, abbreviations. Metric projections, defining space by shades, shadows.
- Application of design principles in flower arrangement – demonstration. Appreciation of art from the point of view of principles of design composition.
- Drawing house plans with standard specifications.
- Furniture layout of living, dining, kitchen and bedroom, Design presentation with furniture layout. Sectional elevation, views.
- Development of designs and construction of any five of the under mentioned items- Cushions, Curtains, Carpets, Door mats, Rugs, Table mats.
- Wall paintings, Picture frame designs and Crafts out of fibre, fabric coir, bamboo, clay metal etc.
- Flower arrangements, styles, innovation of new style