

**DRAFT**

**National Education Policy-2020**

**Common Minimum Syllabus for Uttarakhand State Universities and Colleges**

**Four Year Undergraduate Programme- FYUP/Honours Programme/master's in arts**

**PROPOSED STRUCTURE FOR FYUP/MASTER'S IN HOME SCIENCE SYLLABUS**

**DEPARTMENT OF HOME SCIENCE**

**(FYUP only)**

**List of Experts in drafting NEP (2020) syllabus (Home Science)**

<b>S.no</b>	<b>Name and Designation of Expert</b>	
1	Professor Lata Pande Convenor and Head, Department of Home Science D.S.B Campus, Kumaun University, Nainital, Uttarakhand	Convenor
2	Dr Chhavi Arya Associate Professor Department of Home Science, D.S.B Campus, Kumaun University, Nainital, Uttarakhand	Co-Convenor
3	Dr Meena Batham Associate Professor Department of Fabric and Apparel Science, Institute of Home Economics, Delhi	Expert
4	Dr Parth Banerjee Consultant, Asian Development Bank	Expert
5	Professor Mukta Singh Head Department of Home Science, M.M.V. , B.H.U, Uttar Pradesh	Expert
6	Professor Manisha Ghalot Head Department of Apparel and Textile Science, College of Community Science, G.B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand	Expert
7	Professor Rekha Naithaini Department of Home Science, BGR Campus, Pauri, C.U Gharwal	Expert
8	Professor Jyoti Tiwari Convenor and Head, Department of Home Science Srinagar Campus, Srinagar, C.U Gharwal	Expert
9	Professor Anju Bisht Head Department of Home Science, M.B.P.G College, Haldwani	Committee member
10	Prof Preeti (Home Science) Principal Govt P.G College Joshi math Uttarakhand	Committee member
11	Dr Prabha Bisht Associate Professor Department of Home Science, Govt PG Degree college Doiwala Dehradun	Committee member

<b>FOURTH YEAR</b>	VII	DSC 01	Advanced fabric and clothing construction	Theory	4
		DSE 1a	Research methods and statistics	Theory	4
		DSE 2a	Theories of human development	Theory	4
		DSE 3a	Advance food science	Theory	4 (Compulsory)
		DSE 4a	PRACTICAL 1- Clothing Construction and Food preparations	Practical	4 (Compulsory)
		GE	Rural Sociology	Theory	4
		DISSERTATION	Dissertation on Major OR Dissertation on Minor OR Academic Project/Entrepreneurship	Theory	6
	VIII	DSC 02	Food safety and preservation	Theory	4
		DSE 1b	Life span development	Theory	4
		DSE 2b	Advance home management	Theory	4
		DSE 3b	Extension in home science	Theory	4 (Compulsory)
		DSE 4b	PRACTICAL 2- Practical Aspects of Extension Education	Practical	4 (Compulsory)
		GE	Marriage and Family Dynamics	Theory	4
		DISSERTATION	Dissertation on Major OR Dissertation on Minor OR Academic Project/Entrepreneurship	Theory	6

**Bachelors with Honors in Home Science**

**Semester VII**

**HSC/ DSC/PG 101: ADVANCED FABRIC AND CLOTHING CONSTRUCTION  
CREDIT: 04**

**Course Outcomes:**

Students will be able to

- Understand about Yarn construction, mechanical and chemical spinning
- Understand about Weaving technology
- know about Equipment used in clothing construction

**UNIT I:**

Yarn construction– mechanical and chemical spinning; Different stages of yarn construction; Types of yarn– simple, textured and spun; simple– simple, ply, cord; novelty; ply, cable, double and novelty; yarn numbering and yarn twist

Blends–meaning, types, process and reasons for blending, difference between blends and mixed.

**Unit II:**

Weaving technology: Definition, main operations; Characteristics of woven fabrics;

Selvedge–types; Types of weaves.

Loom–Parts of loom; Classification and types of looms; Motions of the loom

Non-woven fabrics–meaning, types, methods and uses (Felting, Bonded and non-woven fabrics etc.)

Knitting technology: Definition, classification, material and equipments; Methods of knitting–Weft knitting and warp knitting; Uses and disadvantages of knitted fabrics

**Unit III**

Equipment used in clothing construction

Sewing machine: Parts and attachments; common defects and remedial measures, care and maintenance

Anthropometric Measurements: Need; taking measurements for different garments; precautions and method; tools and materials.

**Unit IV**

Techniques of clothing construction:

Drafting: Meaning and importance; tools, method and precautions; drafting on paper and cloth;

Pattern making: Meaning and importance; parts of pattern; tools required; symbols used and general rules.

General principles of clothing construction; Steps in clothing construction: Preparation of fabric for clothing construction; preparing layout; marking of cloth; principles of cutting; principles of stitching; finishing

**Unit V:**

Use of construction features in design- seams, darts, tucks, pleats, gathers, placket opening, Shirring. Different types of–necklines, collars, yokes and sleeves.

**References:**

1. Vastra evam Paridhan, Shashi Prabha Jain and Archana Jain, Shiva Prakashan, Indore
2. Parivarik Paridhan Vyavastha, Manju Patni and Sapna Henry, Star Publications

3. Vastra Vigyan ke Mool Sidhanth, G.P. Sherry, Vinod Pustak Mandir  
4. Griha Vigyan Vishwa kosh, Rama Sharma and M.K Mishra, Arjun Publishing House

## **HSC/ DSE/PG 102: RESEARCH METHODS AND STATISTICS**

**CREDIT: 04**

### **Course Outcomes:**

Student will be able to –

- Demonstrate knowledge of the scientific method, purpose and approaches to research
- Understand Sampling and Editing of statistical data
- Prepare key elements of a research proposal

**Unit I** Research in Home Science- concept need and approaches, Research approaches-problem oriented and interdisciplinary. Type of research Historical survey, experimental and case study

**Unit II** Definition and identification of research problem selection Hypothesis, basis assumption and limitation of research problems

**Unit II** Sampling: Types of samples and selection of samples, data collection techniques: cross-selection and longitudinal, studies: questionnaire, interview schedule, observation, lab-techniques.

**Unit IV** Editing of statistical data, classification and tabulation, role of statistics in research, elementary statistics: classification, tabulation and frequency distribution of data.

**Unit V** Measures of central tendency- Mean Median and Mode

Measures of dispersion– standard deviation. Probability, normal distribution and use of normal distribution, probability tables, t-test for small sample, use of computer for analysis of data, Report writing.

### **References:**

1. Gupta, S.P., Statistical Methods, Sultan Chand and Sons, New Delhi, 1994
2. Jain, Gopal Lal, Research Methodology, Methods, Tools and Techniques, Mangal Deep Publications, Jaipur, 1998
3. Kothari, C.R.: An Introduction to Operational Research, Vikas Publishing House Pvt. Ltd, New Delhi, 1994
4. Wright, Susan E., Social Science Statistics Allyn and Bacon Inc., London, 1986
5. Wisniekwski, Mik, Quantitative Methods for Decision Makers, McMillan India Ltd., New Delhi, 1986

**HSC/DSE/PG 103: THEORIES OF HUMAN DEVELOPMENT**  
**CREDIT: 04**

**Course outcomes:**

After completing this course, the learner will be able to:

- Students will gain an insight into the importance and role of theories in Human Development.
- Students will develop an understanding of selected theories in Human Development.
- Students will become aware of the concepts and perspectives related to human development.

**Unit I:**

Maslow's self-actualization theory  
Freud's psychosexual or psychoanalytic theory  
Erikson's psychosocial theory

**Unit II:**

Skinner's theory of Operant or instrumental conditioning  
Pavlov's theory of classical conditioning  
Thorndike's Trial and Error Learning

**Unit III:**

Kohlberg's six stages of moral reasoning

**Unit IV:**

Piaget's cognitive development theory

**References:**

1. Morgan, Kingetal(1999): "Introduction to Psychology", Tata McGraw-Hill Edition, Delhi, India
2. HurlockE (2000): "Child Development", Tata McGraw-Hill Edition, Delhi, India
3. Bal Vikas evam Bal Manovigyan, Brinda Singh, PanchseelPrakashan, Jaipur

**HSC/DSE/PG/104 ADVANCED FOOD SCIENCE**

**Course outcomes:**

- Understanding Food Science
- Understand about Food Composition and Nutritive Value of different food groups:
- Understand about Food Processing and Preservation:

**CREDIT: 04**

**Unit-1**

Unit-1: Food in relation to health - Introduction to food science as a discipline and modern developments

Functional properties of foods - Definition, structure and properties of food hydrocolloids. Hydrocolloids as gelling, emulsifying, thickening, stabilizing and coating agents.

Important roles of proteins (denaturation and browning), carbohydrates (caramelization and crystallization) and fats (emulsification) in altering the functional properties of food.

## **Unit-2 Different food groups and their nutritive values**

Cereals: Breakfast cereals– Uncooked and ready to eat products; Cereal-based products– processed, fermented and baked

Pulses and legumes: Composition and processing; Toxic constituents of Pulses and elimination of toxic factors.

Nuts and oilseeds: Use and processing

Fats and oils: Functions of oils and fats in food; Processing of fats

Fruits: Composition and nutritive value

Vegetables: Classification, composition, nutritive value and methods of cooking

## **Unit-3**

Meat: Composition, cooking of meat; Changes produced during meat cooking; Meat substitutes

Fish: Type, composition and cookery, preservation and processing

Egg: Nutritive value and structure; Storage and processing; Effect of heat on egg protein;

Egg products; Egg cookery; use of egg as a thickening agent and an emulsifying agent.

Milk: Composition and importance; Milk processing; Milk products; Milk substitute.

## **Unit-4**

Sugar: Different types of sugars; Indian confectionary

Spices and condiments: Role of major and minor spices and their use; active principles in

Some spices, Adulteration of spices.

## **References**

1. Amerine MA, Pengborn RM, RoceasierEB(1965). Principles of Sensory Evaluation and Academic Press, NewYork.
2. Srilakshmi, B. Food Science,4<sup>th</sup> Edition, New Age Publishers, New Delhi.

## **PRACTICAL 01- Clothing Construction and Food Preparations** (HSE/ DSE/ PG 105) Compulsory

### **CREDIT: 04**

#### **Practical:**

1. Drafting and lifting plan of different weaves on graph paper and glaze paper
2. Visit to a cloth weaving unit and report writing
3. Hand knitting samples/article
4. Construction of darts, pleats, tucks, gathers; basic seams; collars and sleeves.
5. Drafting of adult basic bodice and sleeve block and stitching of blouse and kurta
6. Understanding and handling of sewing machine: various parts; accessories; care, common defects and remedial measures
7. Preparation of research proposal in home Science and its report writing.  
Important National and International food preparations

## **HSC/GE/PG 106 Rural Sociology (Credit 03)**

### **Course outcomes**

- It will enable students with the conceptual knowledge of rural sociology
- It familiarizes them with different processes and institutions of rural Indian society.

**UNIT I:** Rural Sociology: Meaning, definition, need to study, scope and importance, difference between rural and urban society.

Structural differentiation, the traditional/modern dichotomy, the rural urban continuum and socio-cultural obstacles or pre-requisites to development

### **Unit II** Planned social change

(a) Approaches to rural planning: Improvement and transformation

(b) Indian rural development Programmes- critical analysis of development

(c) Programme, particularly Integrated Rural Development Programme and their consequences

### **UNIT III:** Indian Rural social stratification

Castes -Basic notions, regional variations, changes and its role in economy and polity

### **UNIT IV:** Indian Rural Institutions

a- Social: Family-Nature, Forms and changes

b- Economic- Objectives and techniques of production: land relations

c- (Ownership, tenancy and labour)

Rural poverty – its manifestations and causes

Physical structure of rural society social organization of rural society

**UNIT V:** Rural leadership – meaning, principles of leadership, types of leaders, qualities of leader,

selection of rural leaders. Status of women in Rural India, Role of women in Rural and Agricultural Development.

**References: 1** nsllkbZ , vkjHkkjrh; xzkeh.klekt'kkL= , University book house Jaipur

**2. Doshi S . L. rural sociology, university book house Jaipur**

**3. Ahuja Ram Social Problems in India, University book house Jaipur**

**4. Aggrwal G. K xzkeh.k lekt'kkL= % vkxjk % lkfgR; Hkou**

**5. çlkj f'k{kk} gjykuh ] LVkj iqfCyds'kUl ] vkxjk**

**6. çlkj f'k{kk ,o alkeqnf;d fodkl ] ikVuh ,oa Bkdqj] f'kokçdk'ku**

### **HSC/VAC/PG107: Dissertation**

**Dissertation on major (4+2) or Dissertation on minor or academic projects /  
entrepreneursh**

## Semester VIII

### HSC/DSC/PG 108: FOOD SAFETY AND PRESERVATION

**CREDIT: 04.**

#### Learning outcomes

##### Students

- Will be able to know about Food sanitation and hygiene
- Will be able to understand about food adulteration
- Will be able to understand methods of Evaluation of foods, and methods of food preservation

#### Unit 1

Food sanitation and hygiene- – Introduction, Definition, Basic aspects of Personal Hygiene, Disease transmission  
Food handling -preventing food borne illnesses, Education of food handler in handling and serving food,  
Importance of personal hygiene of the food handler, pest control  
Food borne diseases  
Causes of food spoilage,

#### Unit2

Definition of Adulteration, Adulterants, Types of adulterants, Food laws – PFA Act,  
Essential Commodities Act,  
FPO Act, MFPO, Milk and Milk products order, Food Standardisation and Regulation Agencies in India-  
Agencies at state level, Central food Laboratories, HACCP, powers of food inspectors.  
Enzymes in food processing

#### Unit-3

Evaluation of foods: Visual examination and sensory evaluation  
(Colour, texture, flavour and taste),

#### Unit4

Introduction to food preservation- Methods of preservation, General principles and applications of  
Food preservation.

Preservation by use of temperature -- Preservation by use of high and low temperature.

Preservation by drying- Preservation by drying and use of salt and sugar

Preservation by use of chemicals

Preservation by food irradiation

**Unit 5 ENHANCEMENT OF FOODS – Food Fortification, Enrichment, Supplementation, Fermentation, Germination, Pre- and Probiotics and Organic Foods**

#### REFERENCES

1:- Sunetra Roday, Food Safety and Sanitation, Tata McGraw-Hill Education, 2017

2:- Norman G. Marriott and Robert B. Gravani, Principles of Food Sanitation, Springer, 2018

3:- Dr. Anju Singh & Dr. Gouri Goyal, Bhojan posan awam swachhta, Sahitya Bhawan Publication, 2022

4:- krishna Sinha, Bhojan posan awam swachhta, Rakhi Prakashan, 2021

### HSC/DSE/PG 109: LIFE SPAN DEVELOPMENT (CREDIT: 04)

#### Course outcomes

- The student will develop an understanding about the discipline of Lifespan development

- The student will understand the concept of stages and domains in lifespan development
- Students will be able to identify key developmental milestones in different life stages

### **Unit I:**

Development during different stages of life cycle.

Prenatal period, conception and pregnancy, stages of prenatal development, factors affecting prenatal development, complications of pregnancy and birth process, Pre-school period- physical growth and motor skills development, language, speech and social development, skill in play, influence of nursery school and home environment on habits and development. Problems of this stage of growth

### **Unit II:**

Elementary school years- physical growth and health, motor personality, social, emotional, cognitive, language, interests and personality development, effect of peers, school and media, role of parent and teacher, problems of this stage of growth.

### **Unit III: Adolescence**

Puberty and Adolescence—definition and characteristics

Physical changes during puberty and adolescence

Developmental tasks of adolescence Social and emotional development during adolescence.

Factors affecting social and emotional Development. Role of parents, teachers, peers and society.

Problems of adolescence—drop out from education system, juvenile delinquency—causes and prevention, addiction and alcoholism. Problems of adjustment, identity crisis.

### **Unit IV: Early Adulthood**

Characteristics; Sub-stages; Developmental Tasks Problems: Adjustments, Interests, Vocational, Marital life and adjustments, Divorce, Re- marriage, Unmarried life/singlehood

**Middle age**;- Characteristic; Subdivision; Developmental tasks, problems, some common problems unique to this stage, Physical changes, Health, Changes in interest, Vocational, Changing family pattern.

### **Unit IV: Old Age**

Characteristics; Subdivisions; Developmental Tasks Types of Changes during ageing: Physical, Sensory, Sexual, Health, Changes in motor abilities, Changes in mental abilities and cognitive capacities, Changes in interests, Retirement, Loss of spouse; Vocational and Family life hazards of old age; Consequences of ageing.

## **REFERENCES**

1. Vikasatmak Manovigyan, Rajendra Prasad Singh, Jitendra Kumar Upadhyay, Rajendra Singh; Motilal Banarsidas, New Delhi.
2. Baal Vikas evam Baal Manovigyan, Vrinda Singh, Panchsheel Prakashan, Jaipur
3. Hurlock B Elizabeth (1981), Developmental Psychology— A Life Span Approach, Tata Mc Graw Hill
4. Hurlock B Elizabeth (1978), Child Growth and Development, Tata McGraw Hill
5. Hurlock B Elizabeth (1997), Child Development, Tata McGraw Hill
6. Papalia E Diane & Olds Wendkos Sally (1975), A Child's World—Infancy through

Adolescence, McGraw-Hill Book Company  
7. Berk E Laura (2000), Child Development, Allyn and Bacon

## **HSC/DSE/PG 110: ADVANCED HOME MANAGEMENT**

**CREDIT: 04**

### **learning outcomes:**

To acquire knowledge about the concept of management.

To acquire knowledge about the concept of values, goals and standards.

To understand the basic concept of Management process

To learn the basic concept of decision making

To understand the meaning and classification of family resources.

Students gain knowledge and skills related to effective time management and resource allocation.

### **Unit1**

Management in family living, characteristics of management in home, role of home management, misconceptions regarding home management

Roles and responsibilities, characteristics and functions of a home manager

### **Unit2**

Values–Concept, characteristics, classification and factors influencing values

Goals–Concept, types, factors influencing goals

Standards–Concept, classification of standards

Interrelatedness of values, goals and standards

### **Unit3**

Management process: Planning, organizing, leading, controlling and evaluating

Decision making: Concept, steps, factors affecting, kind

Resources: Meaning and definition, role, characteristics, classification

### **Unit4**

Time Management: Tools–peak-loads, work-curves, rest periods and work simplification

Energy Management: Classification of efforts used in homemaking, fatigue– types and

Causes, Work simplification: Techniques– pathway chart, operation chart, micro- motion film analysis and path process chart

### **Unit5**

Money Management: Budgeting– Definition, importance and steps in planning

a budget. Account keeping–importance, types of account systems, methods of handling money, family financial records.

### **References:**

1. An Introduction to Family Resource Management, Premavathy Seetharaman, Sonia Batra and Preeti Mehra, CBS Publishers and Distributors
2. Economics of the household, B A Drew, Mc Millan company, New York.

3. Consumer Economics, Dr. Richard, Irwin, Illinois (1983)

### **HSC/DSE/PG 111: EXTENSION IN HOME SCIENCE**

#### **learning outcomes:**

To acquire knowledge about the concept of Home Science extension education  
To acquire knowledge about Role and Qualities of Home science extension worker  
Understand role of Home science in rural development

#### **CREDIT: 04**

**Unit1:** Home Science: Concept, objectives, areas and relationship with extension

Extension: concept, goals and history

Origin and need of Home Science Extension Education

**Unit 2** Home science extension worker: Role and Qualities, Extension education methods.

Communication skills: verbal and non-verbal communication. Relationship between, communication, extension and development.

Role of Home science in rural development, Role of women in rural development

**Unit 3** Methods and media of community outreach; Audio Visual aids in Home Science extension education Agencies (national and international) associated with extension education for rural development. Diffusion of innovation and adoption through extension.

**Unit 4** Community development: Understanding communities and their characteristics. Organization, principles, characteristics and functions

Role of home scientists in community development

Welfare program for rural women and children. (DWARKA, ICDS and other social welfare program (TRYSEM, JRY)

Growth and Development of Panchayati Raj.

Rural Institutions of India. Village school, Mahila mandal, Youth clubs

#### **References:**

1. Griha Vigyan Prasar Shiksha, Manju Patney and U.S Thakur, Shiva Prakashan Indore
  2. Communication for Development in the Third World Theory and Practices (1991). SagePublication, New Delhi.
  3. Chaubey BK (1990) A Handbook of Education Extension, Jyoti Publication, Allahabad
  4. Singh, R. (1987) Textbook of Extension Sahitya Kala Prakashan, Ludhiana
  5. Extension Education in Community (1961) Ministry of Food and Agriculture, Government of India, New Delhi
1. Extension Programme Planning, Oxford and IBH Publishing Company Pvt. Ltd. New Delhi

### **PRACTICAL 2 (HSE/DSE/PG 112): Practical Aspects of Extension Education**

#### **CREDIT: 04**

1. Preparation of recipes from different Indian states

2. Preparation of low cost high nutritive value recipes
3. Visit and Report Writing to Gram Panchayat.
4. Visit and report Writing to household industry.
  
5. Visit and report writing on family court / Legal aid centres.
6. Collection of paper cutting / pamphlets related to any specific topic.
7. Plan and prepare slides / C.D. on any concerned topic
8. Preparation and use of slides use and handling of instructional aids
  8. Demonstration as an instructional technology-method and result demonstration.
  9. Group discussion, lesson planning.
  
10. Making family budget for different income groups while taking into consideration savings and Taxes

### **HSC/GE/PG 113: Marriage and Family Dynamics**

#### **Credit: 04**

Learning outcomes for a course on marriage and family dynamics and understand the significance of marriage and family

- Students will also learn about family life cycles
- To learn about Marital adjustment and Marriage guidance and counselling

#### **Unit I**

Marriage – Meaning, marriage as an institution, goals of marriage, selection of life partner, changes in marriage and their causes. Family life cycle.

Readiness of marriage-physiological, social, psychological and others.

Preparation for marriage

Family – Definition, functions, and types (with reference to family life cycle), characteristics of family, Family structure in India

#### **Unit II**

Patterns of changes in family relationships

#### **Unit III**

Marital adjustment – factors contributing to difficulties in marital adjustment, adjustment to life partners, sexual adjustment, adjustment to in-laws, adjustment to partner hood.

Contemporary issues in Family life

Break-up of extended family, migration, dual career families, Non-traditional families, influence of extra familiar factors, films, TV, peer groups, neighbourhood and school

Breakup of family: Divorce, separation, desertion, death of partner, single parenthood

#### **Unit IV**

Marriage guidance and counselling – meaning of counselling, factors causing tension in married life, importance of marriage guidance and counselling, areas in marriage requiring guidance.

Legal aspects: laws regarding marriage, adoption, divorce, inheritance

#### **References:**

Manav vikas – Shasi Prabha jain, Shiva Prakashan , Indore

#### **HSC/VAC/PG 114: Dissertation**

**Dissertation on major (4+2) or Dissertation on minor or academic projects / entrepreneurship.**

### **Semester VII**

#### **HSC/ DSC/PG 101: ADVANCED FABRIC AND CLOTHING CONSTRUCTION CREDIT: 04**

#### **Course Outcomes:**

Students will be able to

- Understand about Yarn construction, mechanical and chemical spinning
- Understand about Weaving technology
- know about Equipment used in clothing construction

#### **UNIT I:**

Yarn construction– mechanical and chemical spinning; Different stages of yarn construction; Types of yarn– simple, textured and spun; simple– simple, ply, cord; novelty; ply, cable, double and novelty; yarn numbering and yarn twist

Blends–meaning, types, process and reasons for blending, difference between blends and mixed.

#### **Unit II:**

Weaving technology: Definition, main operations; Characteristics of woven fabrics;

Selvedge–types; Types of weaves.

Loom–Parts of loom; Classification and types of looms; Motions of the loom

Non-woven fabrics–meaning, types, methods and uses (Felting, Bonded and non-woven fabrics etc.)

Knitting technology: Definition, classification, material and equipments; Methods of knitting–Weft knitting and warp knitting; Uses and disadvantages of knitted fabrics

#### **Unit III**

Equipment used in clothing construction

Sewing machine: Parts and attachments; common defects and remedial measures, care and maintenance

Anthropometric Measurements: Need; taking measurements for different garments; precautions and method; tools and materials.

#### **Unit IV**

Techniques of clothing construction:

Drafting: Meaning and importance; tools, method and precautions; drafting on paper and cloth;  
Pattern making: Meaning and importance; parts of pattern; tools required; symbols used and general rules.  
General principles of clothing construction; Steps in clothing construction: Preparation of fabric for clothing construction; preparing layout; marking of cloth; principles of cutting; principles of stitching; finishing

#### **Unit V:**

Use of construction features in design- seams, darts, tucks, pleats, gathers, placket opening, Shirring. Different types of–necklines, collars, yokes and sleeves.

#### **References:**

1. Vastra evam Paridhan, Shashi Prabha Jain and Archana Jain, Shiva Prakashan, Indore
2. Parivarik Paridhan Vyavastha, Manju Patni and Sapna Henry, Star Publications
3. Vastra Vigyan ke Mool Sidhanth, G.P. Sherry, Vinod Pustak Mandir
4. Griha Vigyan Vishwa kosha, Rama Sharma and M.K Mishra, Arjun Publishing House

### **HSC/ DSE/PG 102: RESEARCH METHODS AND STATISTICS**

#### **CREDIT: 04**

#### **Course Outcomes:**

Student will be able to –

- Demonstrate knowledge of the scientific method, purpose and approaches to research
- Understand Sampling and Editing of statistical data
- Prepare key elements of a research proposal

**Unit I** Research in Home Science- concept need and approaches, Research approaches-problem oriented and interdisciplinary. Type of research Historical survey, experimental and case study

**Unit II** Definition and identification of research problem selection Hypothesis, basis assumption and limitation of research problems

**Unit II** Sampling: Types of samples and selection of samples, data collection techniques: cross-selection and longitudinal, studies: questionnaire, interview schedule, observation, lab-techniques.

**Unit IV** Editing of statistical data, classification and tabulation, role of statistics in research, elementary statistics: classification, tabulation and frequency distribution of data.

**Unit V** Measures of central tendency- Mean Median and Mode

Measures of dispersion– standard deviation. Probability, normal distribution and use of

normal distribution, probability tables, t-test for small sample, use of computer for analysis of data, Report writing.

**References:**

- 1.Gupta, S.P., Statistical Methods, Sultan Chand and Sons, New Delhi, 1994
- 2.Jain, Gopal Lal, Research Methodology, Methods, Tools and Techniques, Mangal Deep Publications, Jaipur, 1998
- 3.Kothari, C.R.: An Introduction to Operational Research, Vikas Publishing House Pvt. Ltd, NewDelhi,1994
- 4.Wright, Susan E., Social Science Statistics Allyn and Bacon Inc., London,1986
- 5.Wisniekwski, Mik, Quantitative Methods for Decision Makers, McMillan India Ltd., New Delhi,1986

**HSC/DSE/PG 103: THEORIES OF HUMAN DEVELOPMENT  
CREDIT: 04**

**Course outcomes:**

After completing this course, the learner will be able to:

- Students will gain an insight into the importance and role of theories in Human Development.
- Students will develop an understanding of selected theories in Human Development.
- Students will become aware of the concepts and perspectives related to human development.

**Unit I:**

Maslow's self-actualization theory  
Freud's psychosexual or psychoanalytic theory  
Erikson's psychosocial theory

**Unit II:**

Skinner's theory of Operant or instrumental conditioning  
Pavlov's theory of classical conditioning  
Thorndike's Trial and Error Learning

**Unit III:**

Kohlberg's six stages of moral reasoning

**Unit IV:**

Piaget's cognitive development theory

**References:**

- 1.Morgan, Kingetal(1999):"Introduction to Psychology", Tata McGraw-Hill Edition, Delhi, India
- 2.HurlockE (2000): "Child Development", Tata McGraw-Hill Edition, Delhi,India
- 3.Bal Vikas evam Bal Manovigyan, Brinda Singh, PanchseelPrakashan, Jaipur

## HSC/DSE/PG/104 ADVANCED FOOD SCIENCE

### Course outcomes:

- Understanding Food Science
- Understand about Food Composition and Nutritive Value of different food groups:
- Understand about Food Processing and Preservation:

### CREDIT: 04

#### Unit-1

Unit-1: Food in relation to health - Introduction to food science as a discipline and modern developments

Functional properties of foods - Definition, structure and properties of food hydrocolloids. Hydrocolloids as gelling, emulsifying, thickening, stabilizing and coating agents.

Important roles of proteins (denaturation and browning), carbohydrates (caramelization and crystallization) and fats (emulsification) in altering the functional properties of food.

#### Unit-2 Different food groups and their nutritive values

Cereals: Breakfast cereals– Uncooked and ready to eat products; Cereal-based products– processed, fermented and baked

Pulses and legumes: Composition and processing; Toxic constituents of Pulses and elimination of toxic factors.

Nuts and oilseeds: Use and processing

Fats and oils: Functions of oils and fats in food; Processing of fats

Fruits: Composition and nutritive value

Vegetables: Classification, composition, nutritive value and methods of cooking

#### Unit-3

Meat: Composition, cooking of meat; Changes produced during meat cooking; Meat substitutes

Fish: Type, composition and cookery, preservation and processing

Egg: Nutritive value and structure; Storage and processing; Effect of heat on egg protein;

Egg products; Egg cookery; use of egg as a thickening agent and an emulsifying agent.

Milk: Composition and importance; Milk processing; Milk products; Milk substitute.

#### Unit-4

Sugar: Different types of sugars; Indian confectionary

Spices and condiments: Role of major and minor spices and their use; active principles in

Some spices, Adulteration of spices.

### References

2. Amerine MA, Pengborn RM, RoceasierEB(1965). Principles of Sensory Evaluation and Academic Press, NewYork.
2. Srilakshmi, B. Food Science,4<sup>th</sup> Edition, New Age Publishers, New Delhi.

**PRACTICAL 01- Clothing Construction and Food Preparations**  
(HSE/ DSE/ PG 105) Compulsory

**CREDIT: 04**

**Practical:**

11. Drafting and lifting plan of different weaves on graph paper and glaze paper
12. Visit to a cloth weaving unit and report writing
13. Hand knitting samples/article
14. Construction of darts, pleats, tucks, gathers; basic seams; collars and sleeves.
15. Drafting of adult basic bodice and sleeve block and stitching of blouse and kurta
16. Understanding and handling of sewing machine: various parts; accessories; care, common defects and remedial measures
17. Preparation of research proposal in home Science and its report writing.  
Important National and International food preparations

**HSC/GE/PG 106 Rural Sociology (Credit 03)**

**Course outcomes**

- It will enable students with the conceptual knowledge of rural sociology
- It familiarizes them with different processes and institutions of rural Indian society.

**UNIT I:** Rural Sociology: Meaning, definition, need to study, scope and importance, difference between rural and urban society.

Structural differentiation, the traditional/modern dichotomy, the rural urban continuum and socio-cultural obstacles or pre-requisites to development

**Unit II** Planned social change

(a) Approaches to rural planning: Improvement and transformation

(b) Indian rural development Programmes- critical analysis of development

(c) Programme, particularly Integrated Rural Development Programme and their consequences

**UNIT III:** Indian Rural social stratification

Castes -Basic notions, regional variations, changes and its role in economy and polity

**UNIT IV:** Indian Rural Institutions

a- Social: Family-Nature, Forms and changes

b- Economic- Objectives and techniques of production: land relations

c- (Ownership, tenancy and labour)

Rural poverty – its manifestations and causes

Physical structure of rural society social organization of rural society

**UNIT V:** Rural leadership – meaning, principles of leadership, types of leaders, qualities of leader,

selection of rural leaders. Status of women in Rural India, Role of women in Rural and Agricultural Development.

- References:**
1. nsllkZ , vkjHkkjrh; xzkeh.klekt'kkL= , University book house Jaipur
  2. Doshi S . L. rural sociology, university book house Jaipur
  3. Ahuja Ram Social Problems in India, University book house Jaipur
  4. Aggrwal G. K xzkeh.k lekt'kkL= % vkxjk % lkfgR; Hkou
  5. çlkj f'k{kk} gjykuh ] LVkj iqfCyds'kUl ] vkxjk
  6. çlkj f'k{kk ,o alkeqnkf;d fodkl ] ikVuh ,oa Bkdqj] f'kokçdk'ku

**HSC/VAC/PG107: Dissertation**

**Dissertation on major (4+2) or Dissertation on minor or academic projects /  
entrepreneursh**

## Semester VIII

### **HSC/DSC/PG 108: FOOD SAFETY AND PRESERVATION**

**CREDIT: 04.**

#### **Learning outcomes**

##### **Students**

- Will be able to know about Food sanitation and hygiene
- Will be able to understand about food adulteration
- Will be able to understand methods of Evaluation of foods, and methods of food preservation

#### **Unit 1**

Food sanitation and hygiene- – Introduction, Definition, Basic aspects of Personal Hygiene, Disease transmission

Food handling -preventing food borne illnesses, Education of food handler in handling and serving food, Importance of personal hygiene of the food handler, pest control

Food borne diseases

Causes of food spoilage,

#### **Unit2**

Definition of Adulteration, Adulterants, Types of adulterants, Food laws – PFA Act, Essential Commodities Act, FPO Act, MFPO, Milk and Milk products order, Food Standardisation and Regulation Agencies in India- Agencies at state level, Central food Laboratories, HACCP, powers of food inspectors.

Enzymes in food processing

#### **Unit-3**

Evaluation of foods: Visual examination and sensory evaluation

(Colour, texture, flavour and taste),

#### **Unit4**

Introduction to food preservation- Methods of preservation, General principles and applications of Food preservation.

Preservation by use of temperature -- Preservation by use of high and low temperature.

Preservation by drying- Preservation by drying and use of salt and sugar

Preservation by use of chemicals

Preservation by food irradiation

**Unit 5 ENHANCEMENT OF FOODS – Food Fortification, Enrichment, Supplementation, Fermentation, Germination, Pre- and Probiotics and Organic Foods**

## **REFERENCES**

- 1:- Sunetra Roday, Food Safety and Sanitation, Tata McGraw-Hill Education, 2017
- 2:- Norman G. Marriott and Robert B. Gravani, Principles of Food Sanitation, Springer, 2018
- 3:- Dr. Anju Singh & Dr. Gouri Goyal, Bhojan posan awam swachhta, Sahitya Bhawan Publication, 2022
- 4:- krishna Sinha, Bhojan posan awam swachhta, Rakhi Prakashan, 2021

**HSC/DSE/PG 109: LIFE SPAN DEVELOPMENT (CREDIT: 04)**

## Course outcomes

- The student will develop an understanding about the discipline of Lifespan development
- The student will understand the concept of stages and domains in lifespan development
- Students will be able to identify key developmental milestones in different life stages

### **Unit I:**

Development during different stages of life cycle.

Prenatal period, conception and pregnancy, stages of prenatal development, factors affecting prenatal development, complications of pregnancy and birth process, Pre-school period- physical growth and motor skills development, language, speech and social development, skill in play, influence of nursery school and home environment on habits and development. Problems of this stage of growth

### **Unit II:**

Elementary school years- physical growth and health, motor personality, social, emotional, cognitive, language, interests and personality development, effect of peers, school and media,

role of parent and teacher, problems of this stage of growth.

### **Unit III: Adolescence**

Puberty and Adolescence—definition and characteristics

Physical changes during puberty and adolescence

Developmental tasks of adolescence Social and emotional development during adolescence. Factors affecting social and emotional Development. Role of parents, teachers, peers and society. Problems of adolescence—drop out from education system, juvenile delinquency— causes and prevention, addiction and alcoholism. Problems of adjustment, identity crisis.

### **Unit IV: Early Adulthood**

Characteristics; Sub-stages; Developmental Tasks Problems: Adjustments, Interests, Vocational, Marital life and adjustments, Divorce, Re- marriage, Unmarried life/singlehood

**Middle age**;- Characteristic; Subdivision; Developmental tasks, problems, some common problems unique to this stage, Physical changes, Health, Changes in interest, Vocational, Changing family pattern.

### **Unit IV: Old Age**

Characteristics; Subdivisions; Developmental Tasks

Types of Changes during ageing: Physical, Sensory, Sexual, Health, Changes in motor abilities, Changes in mental abilities and cognitive capacities, Changes in interests, Retirement, Loss of spouse; Vocational

and Family life hazards of old age; Consequences of ageing.

## REFERENCES

1. Vikasatmak Manovigyan, Rajendra Prasad Singh, Jitendra Kumar Upadhyay, Rajendra Singh; Motilal Banarsidas, New Delhi.
2. Baal Vikas evam Baal Manovigyan, Vrinda Singh, Panchsheel Prakashan, Jaipur
3. Hurlock B Elizabeth (1981), Developmental Psychology– A Life Span Approach, Tata Mc Graw Hill
4. Hurlock B Elizabeth (1978), Child Growth and Development, Tata McGraw Hill
5. Hurlock B Elizabeth (1997), Child Development, Tata McGraw Hill
6. Papalia E Diane & Olds Wendkos Sally (1975), A Child's World–Infancy through Adolescence, McGraw-Hill Book Company
7. Berk E Laura (2000), Child Development, Allyn and Bacon

## HSC/DSE/PG 110: ADVANCED HOME MANAGEMENT

**CREDIT: 04**

### **learning outcomes:**

To acquire knowledge about the concept of management.

To acquire knowledge about the concept of values, goals and standards.

To understand the basic concept of Management process

To learn the basic concept of decision making

To understand the meaning and classification of family resources.

Students gain knowledge and skills related to effective time management and resource allocation.

### **Unit1**

Management in family living, characteristics of management in home, role of home management, misconceptions regarding home management

Roles and responsibilities, characteristics and functions of a home manager

### **Unit2**

Values–Concept, characteristics, classification and factors influencing values

Goals–Concept, types, factors influencing goals

Standards–Concept, classification of standards

Interrelatedness of values, goals and standards

### **Unit3**

Management process: Planning, organizing, leading, controlling and evaluating

Decision making: Concept, steps, factors affecting, kind

Resources: Meaning and definition, role, characteristics, classification

### **Unit4**

Time Management: Tools–peak-loads, work-curves, rest periods and work simplification

Energy Management: Classification of efforts used in homemaking, fatigue– types and

Causes, Work simplification: Techniques– pathway chart, operation chart, micro-motion film

analysis and path process chart

### **Unit5**

Money Management: Budgeting– Definition, importance and steps in planning

a budget. Account keeping–importance, types of account systems, methods of handling money,

family financial records.

### **References:**

4. An Introduction to Family Resource Management, Premavathy Seetharaman, Sonia Batra and Preeti Mehra, CBS Publishers and Distributors
5. Economics of the household, B A Drew, Mc Millan company, New York.
6. Consumer Economics, Dr. Richard, Irwin, Illinois (1983)

## **HSC/DSE/PG 111: EXTENSION IN HOME SCIENCE**

### **learning outcomes:**

To acquire knowledge about the concept of Home Science extension education

To acquire knowledge about Role and Qualities of Home science extension worker

Understand role of Home science in rural development

### **CREDIT: 04**

**Unit1:** Home Science: Concept, objectives, areas and relationship with extension

Extension: concept, goals and history

Origin and need of Home Science Extension Education

**Unit 2** Home science extension worker: Role and Qualities, Extension education methods.

Communication skills: verbal and non-verbal communication. Relationship between, communication, extension and development.

Role of Home science in rural development, Role of women in rural development

**Unit 3** Methods and media of community outreach; Audio Visual aids in Home Science

extension education Agencies (national and international) associated with extension education for rural development. Diffusion of innovation and adoption through extension.

**Unit 4** Community development: Understanding communities and their characteristics. Organization, principles, characteristics and functions

Role of home scientists in community development

Welfare program for rural women and children. (DWARKA, ICDS and other social welfare program (TRYSEM, JRY)

Growth and Development of Panchayati Raj.

Rural Institutions of India. Village school, Mahila mandal, Youth clubs

**References:**

1. Griha Vigyan Prasar Shiksha, Manju Patney and U.S Thakur, Shiva Prakashan Indore
2. Communication for Development in the Third World Theory and Practices (1991). SagePublication, New Delhi.
3. Chaubey BK (1990) A Handbook of Education Extension, Jyoti Publication, Allahabad
4. Singh, R. (1987) Textbook of Extension Sahitya Kala Prakashan, Ludhiana
5. Extension Education in Community (1961) Ministry of Food and Agriculture, Government of India, New Delhi
2. Extension Programme Planning, Oxford and IBH Publishing Company Pvt. Ltd. New Delhi

**PRACTICAL 2 (HSE/DSE/PG 112): Practical Aspects of Extension Education**

**CREDIT: 04**

5. Preparation of recipes from different Indian states
6. Preparation of low cost high nutritive value recipes
7. Visit and Report Writing to Gram Panchayat.
8. Visit and report Writing to household industry.
5. Visit and report writing on family court / Legal aid centres.
6. Collection of paper cutting / pamphlets related to any specific topic.
7. Plan and prepare slides / C.D. on any concerned topic
8. Preparation and use of slides use and handling of instructional aids
18. Demonstration as an instructional technology-method and result demonstration.
19. Group discussion, lesson planning.

20. Making family budget for different income groups while taking into consideration savings and Taxes

### **HSC/GE/PG 113: Marriage and Family Dynamics**

#### **Credit: 04**

Learning outcomes for a course on marriage and family dynamics and understand the significance of marriage and family

- Students will also learn about family life cycles
- To learn about Marital adjustment and Marriage guidance and counselling

#### **Unit I**

Marriage – Meaning, marriage as an institution, goals of marriage, selection of life partner, changes in marriage and their causes. Family life cycle.

Readiness of marriage-physiological, social, psychological and others.

Preparation for marriage

Family – Definition, functions, and types (with reference to family life cycle), characteristics of family, Family structure in India

#### **Unit II**

Patterns of changes in family relationships

#### **Unit III**

Marital adjustment – factors contributing to difficulties in marital adjustment, adjustment to life partners,

sexual adjustment, adjustment to in-laws, adjustment to partner hood.

Contemporary issues in Family life

Break-up of extended family, migration, dual career families, Non-traditional families, influence of extra familiar factors, films, TV, peer groups, neighbourhood and school

Breakup of family: Divorce, separation, desertion, death of partner, single parenthood

#### **Unit IV**

Marriage guidance and counselling – meaning of counselling, factors causing tension in married life, importance of marriage guidance and counselling, areas in marriage requiring guidance.

Legal aspects: laws regarding marriage, adoption, divorce, inheritance

#### **References:**

Manav vikas – Shasi Prabha jain, Shiva Prakashan , Indore

### **HSC/VAC/PG 114: Dissertation**

**Dissertation on major (4+2) or Dissertation on minor or academic projects / entrepreneurship.**

