

**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**

(HSC 1,2 and 3<sup>rd</sup> year syllabus)

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

S.no	Name and Designation of Expert	
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

**List of Papers (DSC, DSE, GE) with Semester Wise Titles for 'Home Science'**

Year	Semester	Course	Paper Title	Theory/ Practical	Credits	
<b>FIRST YEAR</b>	I	DSC	Fundamentals of Nutrition and Human Development	Theory	3+1	
			Practical (a) Cooking Skills and Healthy Recipe Development	Practical		
		GE	Techniques of Food Preservation	Theory	4	
			SEC	Basics of Food Science	Theory	2
	II	DSC	Introduction to Clothing, Fashion and Family Resource Management	Theory	3+1	
			Practical (b) Clothing and Textile	Practical		
		GE	Entrepreneurship Management	Theory	4	
			SEC	Fruits and Vegetables Preservation	Theory + Practical	1+1
			VAC	Basic Principles of Ayurvedic diets and Nutrition	Theory + Practical	1+1
	<b>Undergraduate Certificate (in the field of Multidisciplinary study)</b>					
<b>SECOND YEAR</b>	III	DSC	Housing, Interior Decoration and Extension Education	Theory	3+1	
			Practical (c) Interior Decoration and Development of Extension Teaching Aids	Practical		
		DSE	Family finance management	Theory	4	
			GE	Entrepreneurship for Small Catering units	Theory	4
			SEC	NGO Management and Corporate Social Responsibility	Theory	2
	IV	DSC	Communication Process and Human Development II	Theory	3+1	
			Practical (d) Practical based on communication process and Human Development	Practical		
		DSE	Food Processing and storage	Theory	4	
		GE	Early Childhood Care and Education	Theory	4	

		SEC	Food Safety, sanitation and hygiene	Theory	2
<b>Undergraduate Diploma (in the field of Multidisciplinary study)</b>					
<b>THIRD YEAR</b>	V	DSC	Surface Ornamentation of Fabrics	Theory	3
			Practical (e) Techniques of Surface Ornamentation of Fabrics	Practical	1 (Compulsory)
		DSE	Community Development and Programme Planning	Theory	4
		GE	Resource management for sustainable development	Theory	4
	VI	DSC	Dietetics and Therapeutic Nutrition	Theory	3
			Practical (f) Therapeutic Diet Preparation and Nutrient Evaluation	Practical	1(Compulsory )
		DSE	Family Welfare and Community Education	Theory	4
		GE	Diet and Nutrition Counseling	Theory+ Practical	3+1
<b>Bachelors (in the field of Multidisciplinary study)</b>					

Semester	Course code	Core (DSC)	Elective (DSE)	Generic Elective (GE)	Skill Enhancement Course (SEC)
I	HSC/DS C/UG 01 (4 credit)	Fundamentals of Nutrition and Human Development- (3Th)		Techniques of Food Preservation (4) HSC/GE/UG 02	Basics of Food Science (2) HSC/SEC/UG 003
		Cooking Skills and Healthy Recipe Development (1 Practical)			
I	HSC/ DSC/ UG 004 (4 credit)	Introduction to Clothing, fashion and Family Resource Management- (3 Th)		Entrepreneurs hip Management (4) HSC/GE/UG 05	Fruits and Vegetables Preservation (1+1) HSC/SEC/UG 06
		Clothing and Textile- (1Practical)			
I	HSC/DS C/UG 007 (4 credit)	Housing, Interior Decoration and Extension Education-(3Th)	Family finance management HSC/DSE/UG 008 (4)	Entrepreneurs hip for Small Catering units (4) HSC/GE/U G 009	NGO Management and Corporate Social Responsibility (2) HSC/SEC/UG 010
		Interior Decoration and Development of Extension Teaching Aids-(1Practical)			
I	HSC/DS C/UG 011 (4 credit)	Communication Process and Human Development II (3Th)	Food Processing and storage HSC/DSE/UG 012 (4)	Early Childhood care and Education (4) HSC/GE/UG 013	Food Safety sanitation and hygiene (2) HSC/SEC/UG 014
		Practical (d) Practical based on communication process and Human Development (1Practical)			
V	HSC/ DSC/ UG 015 (4 cred	Surface Ornamentation of Fabrics -(3 Th)	Community Development and Programme Planning- (4) HSC/DSE/UG 016	Resource management for sustainable development (4) HSC/GE/UG 017	
		Techniques of Surface Ornamentation of Fabrics- (1Practical)			
V	HSC/D SC/UG 018 (4 credit)	Dietetics and Therapeutic Nutrition-(4 Th)	Family Welfare and Community Education- (4) HSC/DSE/UG 019	Diet and Nutrition Counselling (4) HSC/GE/UG 020	
		Therapeutic Diet Preparation and Nutrient Evaluation-(2 Practical)			

**Programme Specific Outcomes (PSOs)**

**(Undergraduate Programme) After this programme, the learners will be**

**able to:**

<b>PSO 1</b>	Learn about the discipline of Home Science, promote all-round development of individuals and families, equip students with practical skills for managing homes and resources, and foster critical thinking and problem-solving abilities, ultimately aiming to improve quality of life and contribute to better society.
<b>PSO 2</b>	Students will be able to develop capabilities to start earning by enhancing their skills in the field of Food and Nutrition, Clothing and Textiles, Human development, Family Resource management and Extension education.
<b>PSO 3</b>	Equip learners with practical skills in meal-planning, preparation of recipes, apparel construction, home management, and child development
<b>PSO 4</b>	Understands the physical, emotional, and cognitive development of children.
<b>PSO 5</b>	Gain knowledge in fabric selection, garment construction, and maintenance.

**Department of Home Science**

**Semester-I**

**BACHELOR OF HOME SCIENCE**

**DISCIPLINE SPECIFIC COURSE (DSC)- Fundamentals of Nutrition and Human Development**

**HOME SCIENCE**

**Programme:** *CERTIFICATE*

**Year:** I

**Semester:** I  
**Paper:** DSC

**Subject:** HOME SCIENCE (credit 3+1)

**Course:** HSC/DSC/UG 01

**Course Title:** Fundamentals of Nutrition and Human Development (Theory)

**Course Outcomes:**

The student at the completion of the course will be able to:

- Students will get familiar with different methods of cooking
- Acquaint students with practical knowledge of nutrient rich foods
- Explain the need and importance of studying human growth and development across life span
- Identify the biological and environmental factors affecting human development
- Learn about the characteristics, needs and developmental tasks of infancy & early childhood years

Credits:3+1

**Core Compulsory/Elective**

Units

Topic

**Part A- Fundamentals of Nutrition**

**I**

Traditional Home Science and its relevance in current era. Contribution made by Indian Home Scientists i.e. Swaminathan, C.V. Gopalan, S.K. Dey, Rabindra Nath Tagore, Shanti Ghosh, etc.

**II**

Food and Nutrition  
Food- meaning, Classification and function  
Basic food groups, Importance of basic food groups, balanced diet  
Nutrition-Concept of Nutrition, health  
Nutrients-Macro (Carbohydrates, Fat, Protein and Energy)  
Micro nutrients (Vitamins and Minerals), sources, functions, requirement and deficiency diseases

**III**

Cooking Methods-Objectives,  
Preliminary preparations-advantages and disadvantages.  
Methods (Dry and Moist Heat methods), importance, Advantages and Disadvantages.  
Preservation of Nutrients while Cooking. Traditional methods of enhancing nutritional value of foods-germination, fermentation, etc. Microwave and Solar Cooking

**Human Development**

IV	<p>Introduction to Human Development</p> <ul style="list-style-type: none"> <li>• Concept, Definition and need to study Human Development</li> <li>• Domains, Stages of development.</li> </ul> <p>Principles of Growth and Development. Determinants of Development heredity and environment</p>
V	<p>Prenatal Development and Birth Process:</p> <ul style="list-style-type: none"> <li>• Conception, Pregnancy and Childbirth, Problems of Pregnancy, Stages of prenatal development, Factors affecting pre-natal development</li> <li>• Physical appearance and capacities of the new-born Maternal and Infant mortality.</li> </ul>
VI	<p>Infancy:</p> <ul style="list-style-type: none"> <li>• Developmental task during Infancy and Preschool Stage</li> <li>• Physical and Motor Development</li> <li>• Social and emotional development</li> <li>• Cognitive and language development</li> </ul> <p>Common ailments of baby hood</p>
	<p><b>Suggested Reading</b></p> <ul style="list-style-type: none"> <li>• Dr. Brinda Singh, Manav Sharir evam Kriya Vigyan Panchchee IPrakashan, Jaipur, 2015, 15<sup>th</sup> Ed.</li> <li>• Chatterjee, C.C, “Human Physiology” Medical Allied Agency: Voll, II.</li> <li>• Textbook of Biology for 10+2 Students (NCERT)</li> <li>• Sumati R Mudambi, “Fundamentals of food Nutrition and Diet Therapy”, New Age International Pvt. Ltd, New Delhi, 6<sup>th</sup> Ed. (2018)</li> <li>• Punita Sethi and Poonam Lakda, “Aahar Vigyan, Suraksha evam Poshan”; Elite Publishing House, New Delhi; 2015</li> <li>• Dr. Anita Singh, Aahar Evam Poshan Vigyan, star Publication, Agra</li> <li>• Dr. Devina Sahai, Aahar Vigyan, New Age International Publishers, New Delhi</li> <li>• Berk, L.E. Child Development New Delhi: Prentice Hall (2005) (5<sup>th</sup> ed.).</li> <li>• Berk L.E. Child Development Allyn and Bacon 1992 (6<sup>th</sup>) Edition</li> </ul>
	<p>This course can be opted as an elective by the students of the following subjects: Open for all</p> <p>The eligibility for this paper is 10+2 with any subject</p>
	<p>Suggested Continuous Evaluation Methods:</p> <ul style="list-style-type: none"> <li>• Seminar/Presentation on any topic of the above syllabus</li> </ul> <p>Test with multiple choice question/short and long answer questions Attendance</p> <p>Course prerequisites: The eligibility for this paper is 10+2 with any subject</p>

### Practical (a) Cooking skills and Healthy Recipe Development

Programme/Class: Certificate	Year: I	Semester: I
<b>Subject: Home Science</b>		
Course Code: HSC/DSC/UG/01	<b>Practical (a) Cooking skills and healthy recipe development</b>	
<b>Course Outcomes:</b>		
<ul style="list-style-type: none"> <li>• Students will get familiar with different methods of cooking</li> <li>• Acquaint students with practical knowledge of nutrient rich foods</li> </ul>		
Credits:01	<b>Core Compulsory/Elective</b>	
<b>Unit</b>	<b>Topic</b>	
<b>I</b>	Basic Cooking skills <ul style="list-style-type: none"> <li>- Weighing of raw materials, Preparing of different food items</li> </ul>	
<b>II</b>	Preparation of various dishes using different methods of cooking <ul style="list-style-type: none"> <li>• Boiling/steaming</li> <li>• Roasting</li> <li>• Frying-Deep/shallow</li> <li>• Pressure cooking</li> <li>• Hot air cooking</li> <li>• Baking</li> </ul>	
<b>III</b>	Different styles of cutting fruits and vegetables <ul style="list-style-type: none"> <li>- Salad Decoration/Dressing</li> <li>- Table setting, Napkin Folding</li> </ul>	
<b>IV</b>	Preparation of nutrient rich dishes <ul style="list-style-type: none"> <li>- Protein rich dish</li> <li>- Carbohydrate rich dish</li> <li>- Fat rich dish</li> <li>- Vitamins rich dish</li> <li>- Minerals rich dish</li> <li>- Fiber rich dish</li> </ul>	
	<b>Suggested Readings:</b> <ul style="list-style-type: none"> <li>❖ Dr.Brinda Singh, Manav Kriya Vigran Panchsheel Prakashan, Jaipur; 2015,15<sup>th</sup> Ed.</li> <li>❖ Dr.Nitu Singh,Prayogik Grih Vigyan, Sahitya Prakashan, Agra</li> <li>❖ Chatterjee,C.C, “Human Physiology” Medical Allied Agency; Voll,II.</li> <li>❖ Text Book of Biology for 10+2 Students (NCERT)</li> <li>❖ Sumati R Mudami, “Fundamentals of food Nutrition and Diet Therapy”, New Age International Pvt. Ltd, New Delhi, 6<sup>th</sup> Ed. (2018)</li> <li>Punita Sethi and Poonam Lakda, “Aahar Vigyan, Suraksha evam Poshan”; Elite Publishing House, New Delhi; 2015</li> </ul>	

This course can be opted as an elective by the students of the following subjects: Open for all

**Suggested Continuous Evaluation Methods:**

- Test with multiple choice question/short and long answer questions
- Menu planning and calculation of nutrient requirement
- Nutritive value calculation of various nutrient rich dish

Course prerequisites: The eligibility for this paper is 10+2 with any subject.

**Suggested equivalent online courses**

I IGNOU and other centrally/state operated Universities/MOOC platforms such as “SWAYAM” in India and abroad.,

<http://heecontent.upsdc.gov.in/Home.aspx>

**Further Suggestions:**

Student may develop their cooking skills with new healthy recipe development after completion of this course and even start their own food service center.

**Generic Elective**  
**HSC/UG/GE 02- TECHNIQUES OF FOOD PRESERVATION**

Programme/ Class: Certificate		Year: I	
Subject: Home Science			
Course Code: HSC/GE/UG 02		Course Title: <b>TECHNIQUES OF FOOD PRESERVATION</b>	
Credits: 4		<b>Minor Elective</b>	
Unit	Topic		
I	<p><b>Food Microbiology</b> Principles of Food Preservation, microorganisms associated with foods- bacteria, yeast and mold, Importance of bacteria, yeast and molds in foods. Classification of microorganisms based on temperature, pH, nutrient and oxygen requirements. Classification of food based on pH, Food infection, food intoxication, definition of shelf life, perishable foods, semi perishable foods, and shelf stable foods.</p>		
II	<p><b>Food Preservation by Low temperature</b> Freezing and Refrigeration: Introduction to refrigeration, cold storage and freezing, definition, principle of freezing, changes occurring during freezing, types of freezing i.e., slow freezing, quick freezing, introduction to thawing, changes during thawing and its effect on food.</p>		
III	<p><b>Food Preservation by high temperature</b> Sterilization, Pasteurization, and blanching. <b>Food Preservation by Moisture control-</b> Drying and Dehydration - Definition, drying as a means of preservation, differences between sun drying and dehydration (i.e. mechanical drying), heat and mass transfer, factors affecting rate of drying, types of driers used in the food industry.</p>		
V	<p><b>Food Preservation by Irradiation</b> Introduction, units of radiation, kinds of ionizing radiations used in food irradiation, mechanism of action, uses of radiation processing in food industry.</p>		
VI	<p><b>Traditional Methods of Food Preservation</b> a) Smoking b) Sun drying c) Pickling/ Salting d) Fermentation</p>		
VII	<p><b>Project – visit to food processing unit (such as fruit and vegetable Processing Unit, milk processing unit, cold storage plant etc.) observing various production processes and quality control and report writing)</b></p>		
<p><b>Suggested Readings:</b></p> <ol style="list-style-type: none"> <li>1. B. Srilakshmi, Food science, New Age Publishers,2002</li> <li>2. Meyer, Food Chemistry, New Age,2004</li> <li>3. Bawa. A.S, O.P Chauhan et al. Food Science. New India Publishing agency, 2013</li> <li>4. Frazier WC and Westhoff DC, Food Microbiology, TMH Publication, New Delhi, 2004</li> </ol>			

**Semester I**  
**Skill Enhancement Courses (SEC)**  
**Course HSC/SEC/UG 03:**  
**Basics of Food Science**

2(2-0-0)

**Course code: HSC/SEC/UG 03**

Course title & Code	Credits	Lecture	Tutorial	Practical\Practice	Eligibility criteria	Pre-requisite of the course (if any)
HSC\SEC\UGC\03-Basics of Food Science	2	2			Class XII	NIL

**Learning objectives:**

1. To impart knowledge on food groups and its nutritional composition
2. To relate the impact of cooking on the stability of nutrients.
3. To analyze the changes during processing and storage on the nutritional composition of foods.
4. To study the factors influencing the cooking quality of different foods.

By the end of the course students will:

- 1: Acquire knowledge on the food groups and factors influencing the changes in different cooking methods.
- 2: Gain knowledge on nutritive value of Cereals, Pulses, Nuts and Oil Seeds, Fats, Oils and changes affecting the nutritive value during cooking methods.
- 3: Gain information on the classification, composition of post-harvest changes of fruits and vegetables
- 4: Gain insight on composition, nutritive value and storage properties of meat, poultry, dairy and fish

**Syllabus:**

**Unit I - Introduction of Food Groups and Cooking Methods.**

Foods, Classification, Functions,  
 Food groups, Balanced Food, Food pyramid, My plate  
 Cooking- Objectives of Cooking,  
 Preliminary preparation, cooking methods, Dry heat, Moist heat, Merits and Demerits.

**Unit II - Cereals, Pulses, Nuts and Oil Seeds, Fats and Oils.**

Structure, Composition and Nutritive Value, Changes in Nutritive Value during Cooking, Processing and storage, cooking quality  
 Cereals- Cereal cookery concepts, fermented products, non-fermented products, breakfast cereals

**Pulses-** Factors affecting cooking quality of pulses, storage and infestation, toxic constituents, pulse cookery.

**Nuts and oil seeds-** Nuts and oil seeds cookery, toxins in nuts and oil seeds

**Fats & Oils -** Processing and refining of fats, Specific fats, Role of fats/oil in cookery, Emulsion, Smoking point, rancidity.

**Unit III –****Vegetables and Fruits**

Vegetables - Classification, Composition and Nutritive Value, Selection, Vegetable cookery- pigments, Changes in Nutritive Value,

**Fruits** - Classification, Composition and Nutritive Value, post-harvest change, enzymatic and non-enzymatic, Storage of Fruits.

**Unit IV- Meat, Poultry, Dairy and Fish.**

**Milk** – Composition and Properties of milk, Nutritive Value, effect of heat, acid, enzymes, phenolic compounds and salts. Microorganisms, Processing, Milk Products, Milk Substitutes, Role of milk and milk products in cookery

**Egg**- Structure, Composition and Nutritive Value, Quality of eggs, Egg cookery, Buying and Handling, preservation, Role of eggs in cookery.

**Fleshy Foods**- Structure, Composition and Nutritive value of meat, Selection and Storage – Effect of cooking on colour, Texture and flavour. Ageing of meat, Curing of Meat, Tendering Meat, Cuts and grades of meat, Meat cookery.

**Poultry** - Classification, Processing, Composition and Nutritive value, Preservation and storage

**Fish** - Classification, Composition, Selection, Fish cookery, Spoilage, Preservation and storage.

**Unit V – Sugars** - Nutritive value, Properties, Stages of sugar cookery, Sugar Related Products, Sugar Cookery and Artificial Sweetener.

**Suggested Readings:**

1. Srilakshmi. B. Food Science, New Age International Pvt Ltd Publishers, 3rd Edition, 2005.
2. Shakuntala Manay, Shadaksharaswamy. M Foods, Facts and Principles, New Age International Pvt Ltd Publishers, Sixth Edition, 2015.
3. Usha Chandrasekhar, Food Science and Application in Indian Cookery, Phoenix Publishing House P. Ltd., New Delhi, 2002.
4. Food science, Chemistry and Experimental foods by M. Swaminathan.
5. Swaminathan, M. : Hand Book of Food Science and Experimental Food

**(Home Science) Semester II****Introduction to Clothing, Fashion and Family Resource Management (Theory)**

Programme/Class: Certificate		Year: I	Semester: II
<b>Subject: Home Science</b>			
Course Code: HSC/DSC/UG 04 <b>Credit 3+1</b>		Course Title: <b>Introduction to Clothing, Fashion and Family Resource Management</b>	
<b>Course Outcomes:</b>			
<ul style="list-style-type: none"> <li>• Learn about scope of textile and clothing</li> <li>• Understanding why fabrics are different</li> <li>• Learn how fabrics can be manufactured</li> <li>• Understand basic concepts of clothing and fashion</li> <li>• Learn basic concepts of family resource management</li> <li>• Understand the decision making and use of resources throughout the lifecycle</li> </ul>			
Credits:3+1		Core Compulsory	
Unit	Topic		
<b>Part-A (Clothing and Fashion)</b>			
<b>I</b>	<b>Introduction</b> a) Introduction to Clothing and Textile (b) Its importance in day-to-day life (c)Scope, (d)Classification of textile fiber on the basis of their source (e)General properties of fibers (f) Identification of fibers: visual test, microscopic test, chemical test and burning test		
<b>II</b>	<b>Knowing Fibers-</b> Manufacture, processing, properties and uses of (a) Cellulosic Fiber -cotton, Linen, Jute, hemp (b)Protein Fibers-Wool, Silk (c)Synthetic/Manmade Fibers-Nylon, Polyester, Acrylic, Rayon		
<b>III</b>	<b>Clothing Construction</b> (a) Tools for Clothing construction (b) Introduction to sewing machine, its parts and maintenance, (c)Importance of Drafting, Flat pattern techniques (d) Fabric preparatory steps for stitching a garment-preshrinking, straightening, layout, pinning, marking and cutting.		
<b>IV</b>	<b>Introduction to Fashion and Fashion Illustration-</b> Fashion terminologies; Theories of fashion adoption- trickle-down theory, trickle across theory, bottom-up theory; factors affecting fashion <b>Fashion Illustration-</b> importance and scope, tools for sketching, preparation of fashion figures; different poses and style, fashion sketching; shapes and silhouette		
<b>Part B (Family Resource Management)</b>			
<b>V</b>	<b>Introduction to Home Management:</b> Basic Concepts, Purpose and Obstacles of Management. Process of Management–Planning, Organization, Controlling and Evaluation. Motivating Factors in Management –Values, Goals and Standards-Definition and Classification.		
<b>VI</b>	<b>Resources-</b> Meaning, Characteristics, Types and Factors affecting the use of Resources. <b>Family lifecycle-</b> Stages of family lifecycle.		
<b>VII</b>	<b>Decision making</b> –Concept and characteristics, definition, steps and role of decision making in management, types of decision, factors influencing decision process.		

**Suggested Readings:**

- ❖ Colbmen P Bernard: Textiles Fiber to Fabric
  - ❖ Hollen & Saddler: Introduction to Textile
  - ❖ Joseph M: Introduction to Textiles
  - ❖ Trotman: Textile Fiber Science
- Cutting Tailoring and Dress Making: National open School, B-31-BKailash Colony, New Delhi-96-3
- ❖ R Bhatia & C Arora (1999), Introduction to Clothing and Textile, Printed by Macho Printery, Raopura, Baroda.
  - ❖ Complete Guide to Sewing by Reader's Digest: published by the Reader's Digest Association (Canada) Ltd. Montreal-Pleasantville, NY, 2002.
  - ❖ Deacon R.E. and Firebaugh F.M. (1998) Family Resource Management-Principles and application. N. Delhi: Roy Houghton Mifflin Company.
  - ❖ Faulkner, R.&Faulkner,S.(1961).ManagementforModernFamilies.N.Delhi:SterlingPublisherLtd.
  - ❖ MoorthyG.(Ed.).(1985).HomeManagement.N.Delhi.:AryaPublishers,Mullick,P.Textbook of Home Science. Ludhiana. :Kalyani Publishers.
  - ❖ Nickell,P.,andDorsey,J.M.(2002).ManagementinFamilyLiving.NewDelhi:CBS Publishers(ISBN13:9788123908519)
    - Patni Manju & Sharma Lalita,Grah Prabandh, Star Publication Agra
    - Varma, Pramila,Vastra Vigyan Avam Paridhan: Madhya Pradesh Hindi Granth Academy,Bhopal.
  - ❖ Varghese, M.A, Ogale, N.Nand Srinivasan,K. (2001). Home Management. New Delhi, New Age International(P) Ltd.
  - ❖ Varghese, M.A. House hold Equipment Manual, S.N.D.TWomen's University, Mumbai.
  - ❖ Suggestive digital platform web links-Svayam Portal, <http://heecontent.upsdc>.

This course can be opted as an elective by the students of the following subjects: Open for all

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**Suggested Continuous Evaluation Methods:**

- Seminar on any topic of above syllabus.
- Test with multiple choice question/short and long answer questions
- Attendance

Course prerequisites: To study this course, a student must have had ALL in class12<sup>th</sup>.

**Suggested equivalent online courses**

IGNOU and other centrally/state operated Universities/MOOC platforms such as "SWAYAM" in India and abroad.

### Practical (b) Clothing & Textiles

Programme/Class: Certificate	Year: I	Semester: II
<b>Subject: Home Science</b>		
Course Code: <b>HSC/DSC/UG 04</b>	Course Title: <b>Practical (b) Clothing &amp; Textiles</b>	
<b>Course Outcomes:</b>		
<ul style="list-style-type: none"> <li>• Ability to identify fibers and fabrics</li> <li>• Understanding why fabrics are different</li> </ul>		
<ul style="list-style-type: none"> <li>• Learn how garments are stitched</li> </ul>		
Credits: 1	Core Compulsory/Elective	
Total No. of lab. periods-30(60hours)		
Unit	Topic	
<b>I</b>	<b>Identification of fiber sand fabrics</b> (a) Fiber identification tests-Visual burning, solubility and microscopic test-natural and synthetic, pure and blended fibers. (b) Weaves identification and understanding their usage	
<b>II</b>	<b>Learning to Stitch-</b> (a) Knowing how to stitch-straight-line stitching, stitch in gat curves and corners (b)Basic Stitching-Temporary Stitching, Permanent and decorative stitching	
<b>III</b>	<b>Basic Sewing</b> -(a) Seams-Plain seams and its finishing, run and fell seam, French seam (b)Attaching different fasteners (c) Disposal of fullness-darts, gathers, tucks and pleats (d) Neckline Finishing- Facing & Binding	
<b>Suggested Readings:</b>		
<ul style="list-style-type: none"> <li>❖ Cutting Tailoring and Dress Making: National open School, B-31-B Kailash Colony, New Delhi-1100048</li> <li>❖ RB hatia &amp; C Arora (1999), Introduction to Clothing and Textile, Printed by Macho Printery, Raopura, Baroda.</li> <li>❖ Complete Guide to Sewing by Reader's Digest: published by the Reader's Digest Association (Canada) Ltd. Montreal-Pleasantville, NY,2002.</li> <li>❖ Helen J Armstrong, Pattern Making for Fashion Design, Prentice Hall.</li> <li>❖ Gerry Cooklin, Introduction to Clothing Manufacture, Blackwell Science, UK,1991</li> <li>❖ Metric Pattern cutting &amp; Grading by Winfred Aldrich.</li> <li>❖ Suggestive digital platform web links- Svayam Portal,<a href="http://heecontent.upsdc.gov.in/Home.aspx">http://heecontent.upsdc.gov.in/Home.aspx</a></li> </ul>		
<b>Suggested Continuous Evaluation Methods:</b>		
<ul style="list-style-type: none"> <li>• Preparation of samples of various types on fabrics'</li> <li>• Evaluation of Prepared garment</li> <li>• Record file preparation and evaluation, Attendance</li> </ul>		
Course prerequisites: Class12 <sup>th</sup> with any subject		
<ul style="list-style-type: none"> <li>• learning basic sewing skills</li> </ul>		

**Entrepreneurship Management  
(Generic Elective)**

Programme/ Class: Diploma	Year: II
Subject: Home Science	
Course Code: <b>HSC/GE/UG 05</b>	<b>Entrepreneurship Management</b>
<b>Course Outcomes:</b>	<p><b>1:</b> - Students will be able to explain the core concepts of entrepreneurship, including its role in economic development, the characteristics of entrepreneurs, and the challenges of entrepreneurial ventures.</p> <p><b>2:</b> - students will learn to assess and identify viable business opportunities by analysing market needs, customer preferences, and industry trends.</p> <p><b>3:</b> - Students will acquire the skills to create comprehensive business plans, including market analysis, financial planning, operational strategies, and risk management.</p>
Credits: 4	<b>Minor Elective</b>
<b>Unit</b>	<b>Topic</b>
<b>Part- A (Theory)</b>	
I	Entrepreneurship – Definition, need, scope and characteristics of entrepreneurship development and employment promotion Identification of Opportunities
II	Entrepreneur and enterprise, entrepreneurial qualities, assessing entrepreneurial qualities, environment scanning and opportunity identification. Methods source and type of opportunity, assessment criteria and profiling opportunities.
III	Infrastructure and support system, Industrial support agencies, Procedure and steps involved in setting up an enterprise, sources of information and industry organization.
IV	Project planning and formulation of project, identification and product selection, generating project ideas, short listing, final selection market survey, market alternatives, an overview of the future, Product development, Product Selection, Preparation of project report
V	Enterprise management, Basic management concepts, personnel management, product management, material management, financial management and accounting, market management, crisis management.
VI	Interaction with entrepreneurs and report writing, visit to any entrepreneurial unit and report writing
<b>RECOMMENDED READINGS</b>	
<ol style="list-style-type: none"> <li>1. Ramachandran, Entrepreneurship Development, Mc Graw Hill</li> <li>2. Katz, Entrepreneurship Small Business, Mc Graw Hill</li> </ol>	

3. Byrd Megginson, Small Business Management An Entrepreneur's Guidebook 7th ed, McGrawHill
4. Fayolle A (2007) Entrepreneurship and new value creation. Cambridge, Cambridge University Press
5. Hougaard S. (2005) The business idea. Berlin, Springer
6. Lowe R & S Mariott (2006) Enterprise: Entrepreneurship & Innovation. Burlington, Butterworth Heinemann

**Semester II**  
**Fruits and Vegetables preservation**  
**Skill Enhancement course**

Course title & code	Credits	Lecture	Tutorial	Practical\Practice	Eligibility criteria	Pre-requisite of course (if any)
HSC/SEC/UG 06 – Fruits and vegetables preservation	2	1		1	Class XII	NIL

<b>Subject: Home Science</b>	
Course Code: <b>HSC/SEC/UG 06</b>	Course Title: <b>Fruits and Vegetables Preservation</b>
<p><b>Learning Objectives:</b></p> <ul style="list-style-type: none"> <li>• To know about various types of fruits and vegetables and their nutritive value.</li> <li>• To understand the reasons for spoilage of fruits and vegetables.</li> <li>• To develop practical skills in preservation of fruits and vegetables.</li> <li>• Learn proper storage methods to maintain quality and taste.</li> </ul> <p><b>Learning Outcomes:</b></p> <p>On successful completion of this course the students will be able to</p> <ol style="list-style-type: none"> <li>1. Identify various types of fruits and vegetables and explain their nutritive value.</li> <li>2. Understand the fragile nature of fruits and vegetables and causes for their damage.</li> <li>3. Explain various methods of preservation for fresh fruits and vegetables.</li> <li>4. Get to know the value-added products made from fruits and vegetables.</li> </ol>	
Credits: 2	<b>Vocational Minor</b>
Units	Topic
<b>Theory</b>	
<b>I</b>	<p><b>Introduction to fruits and vegetables</b></p> <ol style="list-style-type: none"> <li>1. Fruits: Definition, elementary knowledge, types and classification of fruits (fleshy and dry) with local /common examples.</li> <li>2. Vegetables: Definition, elementary knowledge, types and classification of vegetables (root, leafy, stem, flower and fruit) with local/ common examples.</li> <li>3. Importance of fruits and vegetables in human nutrition.</li> </ol>

	4. Concept of perishable plant products – maturation and spoilage, shelf life; preservation – need for preservation of fruits and vegetables. Reasons for spoilage of fruits and vegetables.
<b>II</b>	<ol style="list-style-type: none"> <li>1. Fruits – ripening and biological aging; storage and preservation concerns.</li> <li>2. Fruit preservation at room temperature as juices and squashes</li> <li>3. Preservation of fruits by application of heat; making of fruit products (jams, jellies).</li> <li>4. Preservation by dehydration, -Drying of fruits and vegetables</li> <li>5. Pickles and causes of spoilage of pickles.</li> </ol>
<b>III</b>	<ol style="list-style-type: none"> <li>1. Vegetables – losses after harvesting and causes; problems in handling and storage.</li> <li>2. Modern methods of packaging and storage to reduce losses.</li> <li>3. Preservation of sliced vegetables in factories by canning and bottling, General steps of canning of fruits and vegetables</li> </ol>
<b>Practical</b>	
<ol style="list-style-type: none"> <li>1. Assignments/Group discussion.</li> <li>2. Invited lecture and demonstration by local expert.</li> <li>3. Exhibition and report writing on various types of locally available fruits and vegetables.</li> <li>4. Hands on training on making fruit juices, jams, jellies and pickles.</li> <li>5. Preservation of vegetables by drying and dehydration.</li> <li>6. Report making and presentation of various preserved fruit products available in local market.</li> <li>7. Hands on training on making of potato, Colocasia, and banana chips.</li> </ol>	
<p><b>Suggested Reading</b></p> <ol style="list-style-type: none"> <li>1. Giridharilal, G. S. Siddappa and G.L.Tandon (2007) Preservation of Fruits and Vegetables, Indian Council of Agri. Res., New Delhi.</li> <li>2. Srivastava, R.P., and Sanjeev Kumar (2019) Fruit and Vegetable Preservation : Principles and Practices, CBS Publishers &amp; Distributors Pvt., Ltd., New Delhi</li> <li>3. Thompson, A.K. (1995) Post Harvest Technology of Fruits and Vegetables. Blackwell Sci.,U.K.</li> <li>4. Verma, L.R. and V.K. Joshi (2000) Post Harvest Technology of Fruits and Vegetables. Indus Publ., New Delhi</li> <li>5. Website links- <a href="https://nchfp.uga.edu/">https://nchfp.uga.edu/</a></li> </ol>	

### VAC 1: Basic Principles of Ayurvedic diets and Nutrition

Credit distribution, Eligibility and Pre-requisites of the Course

Course Title & code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite the course
		Lecture	Tutorial	Practical/ Practice		
<b>Basic Principles of Ayurvedic diets and Nutrition</b>	02	1	0	1	Pass Class 12 <sup>th</sup>	NIL

#### Learning Objectives

The Learning Objectives of the course are:

- To introduce students to Ayurvedic Nutrition
- To connect the Ayurvedic nutrition with contemporary dietary practices for health
- To introduce students to Ayurvedic Principles of food habits
- To understand of traditional diets of India
- To understand lifestyle management with application of Ayurvedic diets

#### Learning outcomes

The Learning outcomes of the Course are:

- Awareness regarding traditional food cultures of India and Ayurvedic Nutrition
- Awareness regarding changing food patterns and lifestyle over the years
- Understand Indian Knowledge Systems (IKS) and key Vedic principles with respect to Food and Nutrition
- Awareness regarding FSSAI regulations on Ayurvedic Aahar
- Apply basic principles of traditional diets for health and disease

#### SYLLABUS OF - Basic Principles of Ayurvedic diets and Nutrition

##### UNIT — I Introduction to Ayurvedic Nutrition

- Introduction to Ayurved
- Importance of Ahaar (Nutrition), Triupastambha in maintaining health
- Ayurveda and Indian food cultures
- Nutrition and lifestyle transition over the years
- Regional Food Traditions of India

## UNIT — II Basic principles of Food and Nutrition and Ayurveda

- Understanding rich sources of nutrients
- Concept of Doshas & assessment
- Concept of Aam
- Ayurvedic Principles of food habits and factors determining quality of food (Ahara vidhi visheshaayatana)
- FSSAI regulations on Ayurvedic Aahar

## UNIT — III Ayurvedic Diets

- Principles of Diet: Aharavidhi vidhan, Sattvic, Rajasi, Tamasic foods
- Incompatible food (Viruddha Ahara), Pathya; Apathya; Viprita Ahaar
- Lifestyle Management with Dincharya and Ritucharya
- Application of Ayurvedic diets to stress linked food behaviour

### Practical component (if any) —

- Visit your local market and classify the available food items according to Sattvic, Rajasi, Tamasic foods
- Conduct a survey of 10-15 households in your locality:
  - i. to study food behaviour and analyse them in light of Ayurvedic dietary principles of Sattvic, Rajasi, Tamasic
  - ii. to study the food consumption patterns and intake of incompatible food: Viruddha Ahara, Pathya; Apathya; Viprita Ahaar
  - iii. To know about their adopted lifestyle Dincharya and Ritucharya
- The students may share their experiences in the form of audio-visual presentations of 15-30 minutes.
- Any other Practical/Practice as decided from time to time

### Essential Readings

- Rastogi S (2014) Ayurvedic Science of Food and Nutrition. ASIN: BOOHWMV094, Springer: ISBN-13:978-1461496274
- Rastogi S (2010) Building bridges between Ayurveda and modern science. Int J Ayurveda Res. 1(1):41-46.
- FSSAI regulations on Ayurveda Aahar Regulations 2022. Gazette of India CG-DL-E-07052022-235642. New Delhi, Friday, May 6, 2022/ Vaisakha 16, 1944.
- Frawley D (2012) Ayurvedic healing: A comprehensive guide. Lotus Press, India.
- <https://iksindia.org/>: Indian Knowledge Systems

**B.A. (Home Science) Semester III**

**Housing, Interior Decoration and Extension Education (Theory) (DSC)**

Programme/Class: Diploma	Year: II	Semester: III
Subject: Home Science		
Course Code: <b>HSC/DSC/UG 07</b>	Course Title: <b>Housing, Interior Decoration and Extension Education (Theory)</b>	
Course outcomes:		
<ul style="list-style-type: none"> <li>• Grasp knowledge of Housing, need &amp; selection of site in real life situations.</li> <li>• Comprehending Housing plans for residential purpose.</li> <li>• Appreciate principles of design and the contributing factor store fine personal aesthetic senses.</li> <li>• Learn the widening concepts of Extension Education.</li> <li>• Develop understanding for Effective teaching and learning.</li> <li>• Gain skills to use technologically advanced Audio-visual aids.</li> </ul>		
Credits:3+1		<b>Core Compulsory/Elective</b>
Unit	Topic	
<b>Part-A (Housing and Interior Decoration)</b>		
I	<b>Housing:</b> Need and functions; Difference between House and Home, ways to acquire house (Own and rented). Factors influencing selection and purchase of house and site for house building.	
II	<b>House Planning:</b> Principles of house planning, Planning house for different income groups. Types of Kitchens	
III	<b>Interior Designing:</b> Introduction to Interior designing. Objective of interior decoration. Elements of Art- Line, Shape, Texture, Colour, Pattern, Light and Space, types of design. Colour: Importance in home decoration, meaning, functions, principles of colour, Prang's colour system – hue, value and intensity, factors affecting selection of colour in home decoration, colour schemes.  Principle of design-Proportion, Balance, Rhythm, Emphasis, Harmony. Elements of Design and types of design – naturalistic, stylized, geometric and abstract Structural and decorative design	
IV	<b>Home Decors:</b> Furniture: importance, selection of furniture, types of furniture Accessories – Importance, classification Flower Arrangement – Importance, styles, classification, care of cut flowers.	
<b>PART B (Extension Education)</b>		
V	<b>Extension Education:</b> Meaning, Concepts, Objective, Scope, Principles, objectives, need and importance. Scope of Extension Education, Early Extension Efforts in India, Formal and Non-Formal Education.	
VI	<b>Extension Teaching &amp; Learning Process:</b> Role and qualities of an extension worker, Steps in Extension Teaching Process, Criteria for Effective Teaching and Learning.	

VII	<b>Extension Teaching Methods-</b> Classification, Factors guiding the selection and use of Extension teaching methods.
VIII	<b>Audio- visual Aids:</b> Definition, Importance, Classification, Selection, Preparation and effective use of Audio-visual aids

**Suggested Readings:**

- Khanuja. Reena(2018) Grah Vyavastha avam Grah Sajja .Agarwal Publications,AgraISBN:978-93-81124-96-3
- Patni Manju & Sharma Lalita, Grah Prabandh, Star publications Agra.
- Craig,H.T. and Rush,O.D.(1966).Homes with Character.Heath,1966.
- Faulkner, R., and Faulkner, S., (1961). Inside Todays Home. Rev. ed., New York: Holt, Rinehart & Winston, Inc.
- Goldstein. H& Goldstein.V.(1954) Artin Everyday Life Macmillan Publishers.
- Rutt,A. H. (1963)Home furnishing, John Wiley &Sons, Inc.;
- Supriya ,K.B.(2004).Landscape gardening and designing with plants. Pointer Publishers.
- Teresa ,P.Lanker.(1960).FlowerArranging:Step–by–stepInstructionsforEverydayDesigns Florist Review
- Aggarwal, R.(2008).”Communication-todayandtomorrow”,NewDelhi:SublimeCompany
- Dubey V.K., Srivastava Archana, Agrawal Garima, Grah Vigyan Prasar avam Sampreshan, Star Publications Agra.
- Harpalini B .D.Patni.Manju,(PrasarShikshaAvamSanchar)StarPublications,Agra.ISBN978-93-81246
- Shaw Geeta Pushp, Shaw Jois Sheela, Prasar Shiksha ,VinodPustakMandirAgra.ISBN81-7457-104-3
- Dhahama,O.P.,&Bhatnagar,O.P.(1988).“EducationandCommunicationforDevelopment”. New Delhi.- Oxford and IBH Publish in Co.Pvt. Ltd.
- Jaipal Singh.”Prasar Shiksha avam Gramin Vikas” SR Scientific publications, Agra
- Reddy A.(1987).”Extension Education”. Bapatha, Andhra Pradesh, India: Sreelakshmi Press.
- SupeA.N.(1983).An introduction to Extension Education, Delhi: Oxford IBH publishing

Suggestive digital platform websites Swayam Portal,

- <https://heecontent.upsdc.gov.in/Home.aspx>



This course can be opted as an elective by the students of following subjects: Open for all

**Suggested Continuous Evaluation Methods**

- Seminar on any topic of the above syllabus
- Test with multiple choice questions/short and long answer questions.
- Preparation of Audio-visual aids.
- Attendance

Course prerequisites: Class12<sup>th</sup>with any subject

**Suggested equivalent online courses:**

IGNOU&Othercentrally/stateoperatedUniversities/MOOCplatformssuchas “SWAYAM  
“in India and Abroad

**Further Suggestions:**

It widens the scope for students to join Government and Non-Government organization, up skilling the people at different level sasper their socio-economic structure. Extension work will speed up the basic structures (Gram Panchayat, Village School and Cooperative Societies) etc.

### Interior Decoration and Development of Extension Teaching Aids (Practical)

Programme/Class: Diploma	Year: II	Semester: III
Course Code: <b>HSC/DSC/UG007</b>	Course Title: <b>Practical (c) Interior Decoration and Development of Extension Teaching Aids</b>	
Course outcomes: <ul style="list-style-type: none"> <li>• Developing skills for making time plan for effective balance of work &amp; leisure.</li> <li>• Plan &amp; prepare budget for the family.</li> <li>• In corporate appropriate work simplification in using house hold equipment's.</li> <li>• Develop understanding for house planning &amp; decoration</li> </ul>		
Credits:1		<b>Core Compulsory</b>
Unit	Topic	
I	<ul style="list-style-type: none"> <li>• Preparation of Color wheels and Color schemes.</li> <li>• Display of following colour schemes through a design Monochromatic, analogous, complementary, tri colour- colour schemes</li> <li>• Flower Arrangement and Floor Decoration (Rangoli)-Application of Design principles and Element of Art, Innovation of new styles.</li> </ul>	
II	<ul style="list-style-type: none"> <li>• Plans and elevation of different furniture pieces.</li> </ul> Preparing drawings for furniture arrangements considering incomes, size and needs of family.	
III	Draw House Plans with Standard Specifications and Furniture Layout.	
IV	<ul style="list-style-type: none"> <li>• Preparation of Projected (PowerPoint presentation, Slides) and</li> <li>• Preparation of non-projected communication aids (chart, poster, flashcard).</li> </ul> Construction of message through mobile SMS, email, reels or short video on social and environmental issues	
	<b>Suggested Readings:</b>	
	<ul style="list-style-type: none"> <li>• Alexander.N.J.,(1972).DesigningInteriorEnvironment.NewYork:HarcourtBrace,</li> <li>• Bhargava,B.(2005). Family Resource Management and Interior Decoration, Jaipur: Apple Printer and V. R. Printers.</li> <li>• Faulkner,R.,andFaulkner,S.,(1975).InsideTodaysHome,NewYork:Rinehart</li> <li>• Gnnodotra,V.andJaiswal,N.(2008).ManagementofWorkinHome,New Delhi:DominantpublishersandDistributors.(ISBNNo. 81-7888-526-3)</li> <li>• Harmon,S.and Kennon,K.(2018).The code cguide book for Interiors (5<sup>th</sup>Ed.).New York: Wiley (ISBN:978-1-119-342319-6)</li> <li>• JohanovichInc. Ball,V.K.(1982).Art of Interior Design.New York: JohnWiley&amp;Sons.</li> <li>• Leach, S. D. (1978). Techniques of Interior Design Rendering and Presentation (1<sup>st</sup>Ed.).Architectural Record Books(ISBN-13:978-0070368057)</li> <li>• Mohanty,A.B.(1985).Guide to house buildings. New Delhi: Inter India Publications</li> </ul>	

	<ul style="list-style-type: none"> <li>• Patni Manju &amp; Sharma Lalita, Grah Prabandh, Starpublications Agra.</li> </ul> <p>Suggestive digital plat form websites</p> <ul style="list-style-type: none"> <li>• <a href="https://bit.ly/3fJfghi">Bit.ly/3fJfghi</a></li> <li>• <a href="https://bit.ly/39mTwGQ">https://bit.ly/39mTwGQ</a></li> <li>• <a href="https://bit.ly/2JoXB2e">https://bit.ly/2JoXB2e</a></li> <li>• <a href="https://bit.ly/3lkrWf">https://bit.ly/3lkrWf</a></li> </ul> <p>Swayam Portal,</p> <ul style="list-style-type: none"> <li>• <a href="https://heecontent.upsdc.gov.in/Home.aspx">https://heecontent.upsdc.gov.in/Home.aspx</a></li> </ul>
	This course can be opted as an elective by the students of following subjects: Open for all
	<p>Suggested Continuous Evaluation Methods</p> <ul style="list-style-type: none"> <li>• Assessment of Time-Energy, Budget &amp; House Plans.</li> <li>• Assessment of Market Survey Records</li> </ul> <p>Assessment of Flower Arrangements and Rangoli.</p>
	Attendance.
	Course prerequisites: To study this course, a student must have had the subject.....in class/12 <sup>th</sup> /certificate
	Suggested equivalent online courses: IGNOU & Other centrally/state operated Universities/MOOC platforms such as “SWAYAM” in India and Abroad
	<p>Further Suggestions:</p> <ul style="list-style-type: none"> <li>• Students may develop their managerial skills &amp; Interior Designing skills after completion of this course with the capability to for a job or start their own ventures.</li> </ul> <p>The program giving an opportunity to advancement their knowledge by enrolling for advanced specialized program of their own areas &amp; interest.</p>

**B.A. (Home Science) Semester III**  
**HSC/DSE/UG 08 Family Financial Management (DSE)**  
**Credit. Hrs. 4**  
**Course code- HSC/DSE/UG 008**

**Course outcomes**

After completing the course, students will be able to:

1. Acquire knowledge of income, saving and investment management in the changing socio-economic environment.
2. Develop an understanding about the issues related to consumer protection, legislative measures and redressal mechanisms.
3. Gain conceptual knowledge of critically evaluating and designing various consumer aids and about consumer education and protection.
4. Learn to undertake food adulteration tests through lab analysis.
5. Understand the schemes and services offered by banks and post office

**HSC/DSE/UG 08 Family Financial Management (DSE)**

**Unit 1. Income-** concepts, productive income, money income, hidden income, limits and factors affecting fluctuations in real income, depreciation in money value, inflation, deflation, consumer price index.  
 2. Money as a crucial resource in economic welfare

**Unit 2 Saving**

Saving, methods of saving, institutions for saving,  
 Investment: methods of investment- Mutual funds, shares, debentures, dividends

**Unit 3 Budget**

Budget: Definition, Types, Importance, Principles, Characteristics of good budget, steps in making budget and misconceptions, household budget, factor affecting budget

**Unit 4 Financial management**

Financial management, Financial Planning, Family Income, Financial Spending Plans, Methods of handling Money, Family life stages and use of Money, Record keeping, Account keeping

**Unit 5 Taxation**

Taxation, type of taxation and its effect, value added tax, Income Tax: Income tax slabs, Pan card, information regarding taxation, income tax section, tax rebate, tax evasion, advantages and disadvantages, principles of sound taxation system.  
 spending plan

**Expert lectures to be arranged for students by experts from commerce/economics/financial back ground**

**Suggested Readings:**

- 1:- Dr F C Sharma & C S Rachit Mittal, financial management, SBPD Publications. 2022
- 2:- Premavarthy Seetharaman, Preeti Mehra & Sonia Batra *Family Resource Management* , CBS Publisher and Distributors Pvt ltd , 2015

## B.A. (Home Science) semester III

### Course title-Entrepreneurship for Small catering units (GE)

#### HSC/GE/UG 09

#### Course Outcomes

Students will be able to:

1. Acquire fundamental knowledge of menu planning and resource management in a food service establishment.
2. Develop understanding of recipe standardization and quantity food production.
3. Develop understanding of making a business plan for a small food service unit.
4. Apply the knowledge gained for starting a successful food service unit.

#### Course Title - Entrepreneurship for Small catering units (GE)

#### Course code - HSC/GE/UG 09

#### Theory (Credit 4)

##### Unit I: Introduction to Food Service Management

Basics of management and food service for a small food establishment

- Principles of Management
- Functions of Management
- Types of food service systems

##### Unit II: Production Process in a Food Service Establishment

Components of food production cycle to run a small-scale food service unit.

- Menu Planning: Importance of menu, Factors affecting menu planning, Types of menu
- Food purchase and receiving
- Storage
- Quantity food production: Standardization of recipes, Recipe adjustment and portion control, Techniques of quantity food production
- Food service
- Food hygiene and sanitation, National food regulations

##### Unit III: Resource Management in a Food Service Unit

Understanding fundamentals of space, personnel and financial management

- Types of kitchen areas, Flow of work and work area relationship
- Equipment: Factors affecting selection of equipment, Equipment needs for different situations
- Personnel Management: Functions of a personnel manager, Factors to consider while planning the kind and number of personnel
- Financial Management: Importance of financial management, Budgets and budgeting process, Cost concepts

##### Unit IV: Planning a Food Service Unit

Developing business plan and strategies for establishing a small-scale food service unit

- Identifying resources, developing project plan, Determining investments
- Basics of marketing: 4P's
- Development of a business plan

##### Unit V: project -: Visit to a catering unit, studying its functioning and various operations and report writing

#### Suggested Readings

1:- Sanjeet sharma & Prerna, udhyamita awam laghu stariya vyawsay , VK Global Publication private Limited, 2023

2:- Lora Arduser and Douglas Robert Brown, The Professional Caterer's Handbook, Atlantic Publishing Company, 2006

3:-Dr Avinav Sharma, Udhyamita awam laghu vyawsav pravandhan, Educreation publishing, 2017

**Semester III**  
**Skill Enhancement Course**

Course title and code	Credits	Lecture	Tutorial	Practical\ Practice	Eligibility criteria	Pre-requisite of the course (if any)
HSC/ SEC/UG 10- NGO Management and corporate social responsibility	2	1		1	Class XII	NIL

<b>Subject: Home Science</b>	
Course Code: <b>HSC/ SEC/UG 10</b>	Course Title- <b>NGO Management and corporate social responsibility</b>
<b>Learning Objectives:</b>	
<ul style="list-style-type: none"> <li>• To equip students with knowledge and skills to manage NGOs effectively.</li> <li>• To help students understand role, structure and function of NGO.</li> <li>• To help students understand CSR principles and contribute positively to social change.</li> </ul>	
<b>Course Outcomes:</b>	
<b>On completion of this course,</b>	
1. The student will be able to understand the concept of NGO.	
2. Will gain ability to critically analyze challenges face by NGOs.	
3. To develop knowledge and skill with regard to fund raise strategies.	
Credits: 2	<b>Vocational Minor</b>
	Total No. of Lectures-45
<b>Units</b>	<b>Topic</b>
<b>Theory</b>	
<b>I</b>	<b>Concept of NGO</b> <ul style="list-style-type: none"> <li>• Meaning of NGO and GO</li> <li>• Difference between Government Organizations and NGO</li> <li>• Characteristics of good NGO</li> <li>• Structure of NGO</li> <li>• Functions of NGO</li> <li>• Historical Perspective of NGO</li> <li>• Advantages of NGO</li> <li>• Present status of NGO</li> <li>• Contribution of NGO in the Development</li> </ul> Role of Development Communicator in developing NGO

<b>II</b>	<b>Starting of NGO</b> <ul style="list-style-type: none"> <li>• Steps for starting NGO</li> <li>• Registration of NGO</li> <li>• Selection of Personnel</li> <li>• Training of Personnel</li> <li>• Proposal writing under NGO</li> <li>• Identifying Funding agencies</li> <li>• Resource Mobilization</li> <li>• Planning, Implementation and Evaluation strategy under NGO</li> <li>• Documentation</li> <li>• PR in NGO</li> </ul>
<b>III</b>	<b>NGO Management</b> <ul style="list-style-type: none"> <li>• Organizational types and structures</li> <li>• Managing people and teams in NGOs</li> <li>• NGO management competencies</li> <li>• Applying NGO principles and values</li> <li>• Accountability and impact assessment for NGOs</li> </ul>
<b>IV</b>	<b>Problems of NGO</b> <ul style="list-style-type: none"> <li>• Training</li> <li>• Recruitment</li> <li>• Funding</li> <li>• Resource Mobilization</li> <li>• Documentation</li> </ul>
<p><b>Learning Experiences:-</b></p> <ol style="list-style-type: none"> <li>1. Visit of Local NGO</li> <li>2. Studying the Annual report of NGOs</li> <li>3. Studying the ongoing Activities</li> <li>4. Studying the problems</li> </ol> <p><b>Suggested Readings</b></p> <ul style="list-style-type: none"> <li>• S. Chandra, Guidelines for NGO Management in India (2003), Published by Kanishka Distributors, New Delhi</li> <li>• D. Lewis, Management of Non Governmental Development Organization (2001), Second Edition, Published by Routledge, Newyork.</li> <li>• Abraham, Formation and Management of NGOs (2003), Third Edition, Published by Universal Law Publishing Co. Pvt Ltd., New Delhi.</li> <li>• Sundar, P. 2013, Business and Community: The Story of Corporate Social Responsibility in India , New Delhi, Sage Publication.</li> <li>• Aggarwal, S.2008, Corporate Social Responsibility in India, Sage Publication Pvt. Ltd.</li> </ul>	

**B.A. (Home Science) Semester IV**

**Communication Process and Human Development II (Theory) (DSC)**

Programme/Class: Diploma		Year: II	Semester: IV
<b>Subject: Home Science</b>			
Course Code: <b>HSC/DSC/UG 11</b>		Course Title: <b>Communication Process and Human Development II (Theory)</b>	
<b>Course Outcomes:</b>			
The student at the completion of the course will be able to:			
Understand communication process			
Credits:3		Core Compulsory	
Unit	Topic	No. of lectures	
<b>Part A- (Communication Process)</b>			
<b>I</b>	Communication- Meaning and definition, concept, functions, problems and barriers of communication, elements of communication, types of communication process, classification of communication methods		
<b>II</b>	ICT and New communication media, social networking sites, social awareness regarding cyber-crime and cyber security		
<b>III</b>	Models of Communication- Different models of communication, important characteristics of good communicators, communication barriers and strategies to overcome barriers		
<b>IV</b>	Innovation, Adoption and Diffusion: Innovation, adoption, diffusion of innovation, innovation decision process, factors affecting adoption process, role of extension agent in diffusion process		
<b>Part B (Human Development II)</b>			
<b>V</b>	Middle Childhood Years Development tasks and characteristics of middle childhood period <ul style="list-style-type: none"> <li>• Physical and motor development</li> <li>• Social and emotional development.</li> <li>• Cognitive development</li> <li>• Language development</li> </ul>		
<b>VI</b>	Puberty and Adolescence <ul style="list-style-type: none"> <li>• Development tasks and characteristics</li> <li>• Significant physical physiological influencing and hormonal changes in puberty.</li> </ul> Self and Identity, Factors influencing Identity & Personality development. <ul style="list-style-type: none"> <li>• Family and peer relationship</li> </ul> Problems- Drug and Alcohol abuse, STD, HIV/AIDS, Teenage Pregnancy.		

<b>VII</b>	<p>Cognitive, Language and Moral Development during Adolescence:</p> <ul style="list-style-type: none"> <li>• Perspective on cognitive development, development of intelligence and Creativity</li> <li>• Adolescent language</li> <li>• Adolescent Morality</li> </ul>
<b>VIII</b>	<p>Introduction to Adulthood</p> <ul style="list-style-type: none"> <li>• Concept, transition from adolescence to adult hood</li> <li>• Development tasks of Adulthood</li> <li>• Physical and physiological changes from young adulthood to late adulthood</li> </ul> <p>Responsibilities and adjustment-educational, occupational, material and parenthood</p>
	<p><b>Suggested Readings:</b></p> <ul style="list-style-type: none"> <li>• Monaster G.J. 1 Adolescent Development Life Tasks. Mc.Graw Hill (1997)</li> <li>• Ambron S.R. Child Development Holt, Rinehart and Winston 1978 (II Edition)</li> <li>• Mussen P.H. Conger J.J. Kagan J and Huston A.C. 1990. Child development and Personality (VI Edition) Harper and Row Publishers New York.</li> <li>• Boeknek G. Human Development Book and Cole Publishing Company 1980.</li> <li>• Aadunik Vikasatmak Mano vigyan, Shri Vinod Pustak Mandir Agra Edition 3<sup>rd</sup> 2015.</li> <li>• Harpalani, Aahar vigyaan avam Upchar atmak Poshan, Star Publication, Agra</li> <li>• Suggestive digital platform web links-IGNOU &amp; UPRTOU online study material</li> </ul> <p>Svayan Portal <a href="http://heecontent.upsdc.gov.in/Home.aspx">http://heecontent.upsdc.gov.in/Home.aspx</a></p>

**Suggested Continuous Evaluation Method:**

- Seminar on any topic of the above syllabus.
- Test with multiple choice questions/short and long answer questions
- Attendance

**Suggested equivalent online courses:**

IGNOU&Othercentrally/stateoperatedUniversities/MOOCplatformssuchas “SWAYAM  
“in India and Abroad

**Further Suggestions:**

Students can opt. dietitian; nutrition advisor/Nutritionist as a career in private and government sector as well as extend knowledge by joining advance course in same discipline.

ItwidensthescopeforstudentstojoinGovernmentandNon-

Governmentorganizationupskillingthepeopleatdifferentlevels as per their socio-economic structure.

**Suggested Continuous Evaluation Method:**

- **Seminar on any topic of the above syllabus.**
- **Test with multiple choice questions/short and long answer questions**

**Attendance**

### Practical (d) Practical based on communication process and Human Development

Programme /Class: Diploma		Year: II
Course Code: <b>HSC/DSC/UG 011</b>		
Credits: 1		
Unit	Topics	
I	Preparation of speech on socially relevant topics, Planning and Conducting small group communication Preparation of folder, booklet	
II	Preparation of radio talk Construction of social message through mobile – text and video	
III	To study recent research articles on adolescents and write a report. To conduct a survey to assess peer pressure/ impact of media on adolescents.	
IV	To write a narrative account on adolescent years to understand the development of self. To develop different activities to facilitate cognition and creativity in adolescents.	
V	Interviews of adolescent girls and boys to understand their lifestyle, behavior and problems.	
VI	Carry out case studies to know more about the different life stages, school going children, adolescents, young adults.	
	<p><b>Suggested Readings:</b></p> <ul style="list-style-type: none"> <li>• MonasterG.J.1 Adolescent Development Life Taska, Mc Graw Hill(1977)</li> <li>• Ambron S.R. Child Development Hekt, Renhart and Winston 1978 (IIndEdition).</li> <li>• Mussen P. H., Conger J.J .KaganJ. and Huston A.C. 1990.Child Development and Personality (VI Edition) Harper and Row Publishers New York.</li> <li>• BoeknekG. Human Development Brook and Cole Publishing Company 1980</li> <li>• Aadhunik Vikasatmak Manovigyan, Shri Vinod Pustak Mandir Agra Edition3<sup>rd</sup>2015</li> </ul> <p>Suggestive digital platfor ms web links- ePG- Pathshala infilibnet, IGNOU, &amp; UPRTOU online study material. <a href="https://bit.ly/3922ZTH">https://bit.ly/3922ZTH</a></p> <p>Swayam Portal,<a href="https://heecontent.upsdc.gov.in/Homeaspx">https://heecontent.upsdc.gov.in/Homeaspx</a></p>	

	<p>Suggested Continuous Evaluation Methods</p> <ul style="list-style-type: none"><li>• Assessment of observation report</li><li>• Preparation of questionnaire</li><li>• Visits records</li></ul> <p>Attendance</p>
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**Food Processing and Storage (DSE)****Cr. Hrs. 4****Course Code- HSC/DSE/UG 12****Course Outcomes:**

Students after successful completion of the course will be able to:

1:- Understand the principles behind food preservation technologies such as freezing, drying, canning, and pasteurization.

2:- Learn about the factors affecting food spoilage and the methods to prevent it.

**Theory Topics**

Unit 1) Processing and storage of foods in the national perspective and their role in human nutrition. Processing of cereals, millets and legumes by traditional and unconventional methods. Changes in nutritional quality as affected by: pounding, milling. Puffing, flaking, cooking, parboiling. Fermentation, sprouting, malting Processing and packaging of milk products and their effect on nutritional quality

Unit 2) Common methods of preservation for fruits and vegetables and effects on nutritional quality characteristics

Unit 3) Processing of oilseeds for extraction of oils and use of oilseed cakes in human nutrition, limitations and possible improvements.

Unit 4) Different methods of cooking and preservation of meat, fish and poultry. effects on nutritional quality and merits and demerits of various methods

Unit 5) Traditional methods for storage of food grains viz, cereals, millets, legumes and oilseeds, limitations, losses in nutritional quality as influenced by insect and fungal infestation

Current strategies for storage of food grains at national and international level

**Practical**

**Practical on Fermentation, sprouting, malting and puffing of cereals, millets and pulses**  
**Practical based on different methods of domestic food preservation**

**Suggested Readings**

- Frazier WC and Westhoff DC (2014). Food Microbiology, Fifth Edition. TMH Publication, New Delhi.
- Manay NS and Shadaksharaswamy M (2008). Food-Facts and Principles, Third Edition. New Age International (P) Ltd. Publishers, New Delhi.
- Mathur P. (2018). Food Safety and Quality Control. Orient BlackSwan Pvt. Ltd., Hyderabad.
- Potter NN and Hotchkiss H J (1996). Food Science, Fifth Edition. CBS Publication,

New Delhi.

- Suri, S. and Malhotra, A. (2014). Food Science Nutrition and Safety. Delhi: Pearson India Ltd.
- Mohini Sethi, Eram Rao (2011). Food science- Experiments and applications, Second Edition. CBS publishers & Distributors Pvt Ltd.

**HSC /GE/UG 13 EARLY CHILDHOOD CARE AND EDUCATION  
CREDIT: 04**

**I. Course Outcomes:**

Students after successful completion of the course will be able to:

1. Understand the meaning and importance of Pre-school/Early childhood education
2. Acquire a critical knowledge about various activities for pre-school children

**Unit I early childhood years:** developmental milestones, development during early childhood: physical, cognitive, social, emotional, moral and language development  
factors influencing physical, cognitive, social, emotional, moral and language development

**Unit II: Historical perspective**

Concept of learning: definition, essential features, types and principles of learning  
Learning environment: reinforcement, punishment, motivation and discipline

**Unit III: Learning philosophies**

Theories for classroom teaching and its applicability-  
Jean Piaget, Erik Erikson, Maria Montessori, Lawrence Kohlberg  
Indian: Rabindranath Tagore (1861–1941), Gijubhai Badeka, M.K Gandhi, Tarabai Modak

**Unit IV Family:** types of families and their effect on development of child  
Types of parenting and their effect on children

**Unit V: Principles of Early Childhood Education**

Objectives; Need and significance; Basic Principles;  
The Playway Method; Early Childhood education services in India- Government Sector–  
ICDS, NIPCCD, NCERT etc; Voluntary Sector–ICCW, Balwadi, MobileCreche’s, ECCE  
centers etc.; Private Sector (Nursery,Pre- Primaryetc)

**Unit VI: Play**

Concept of Play; Play and Learning; Role of play in development; Play as a means of  
understanding children’s development; Different types of play among preschool children  
(unoccupied behaviour, onlooker, solitary independent play, parallel activity, associative play,  
cooperative or organized, supplementary play)

**Unit V :: Project - Visit a locality and other public spaces to note all the facilities  
available for children for play, learning and skill building and report writing  
Preparation of education material for nursery school children**

**References:**

1. NCERT (1991), A Guide for Nursery School Teachers, NCERT, New Delhi

2. Seth Kanta, Ahuja Kavita (1996), Minimum Specifications for Pre-Schools, NCERT, New Delhi
3. Kohn Ruth (2003), The Exploring Child– A Handbook for Pre-Primary Teachers, Orient Longman, Delhi
4. Chowdhury D Paul (1995), Child Welfare/Development, Atma Ram & Sons, Delhi
5. Certificate Course in Organizing Child Care Services, IGNOU, (Block 1 to 6)
6. Grewal JS (1998), Early Childhood Education– Foundations and Practice, Har Prasad Bhargava, Agra

## FOOD SAFETY, SANITATION AND HYGIENE

(Skill Enhancement Course) (Elective)

### HSC /SEC/UG 14

Course title & code	credits	lecture	Tutorial	Practical\ practice	Eligibility criteria	Pre-requisite of the course (if any)
HSC /SEC/UG 14- Food safety, sanitation and hygiene	2	1		1	Class XII	NIL

### Learning objectives

- To understand food safety principles and its importance in preventing the foodborne illnesses.
- To understand the importance of sanitation in food handling and preparation.
- Implementing personal hygiene standard.

### Course Outcomes

After successful completion of the course, the students will be able to

1. Enumerate the various aspects of food safety and to identify the causes and prevention procedures for food borne illness, intoxication and infection
2. Understand the need for consumer education and discuss occupational safety and health administration requirements.
3. Analyze food handling procedure, describe food storage and refrigeration techniques.
4. Evaluate labelling methods by following the principles of food safety, sanitation and hygiene
5. To create awareness regarding sanitation of dishes, equipment and kitchen.

## II. Theory Syllabus

**Unit – I** Food safety- Definition, Meaning - factors affecting food safety - importance of food safety - Risks and hazards - Food related hazards - microbial consideration in food safety- Food safety and standards bill 2005

**Unit – II** Basic principles of Food hygiene and Sanitation - Personal and environmental Hygiene – Hygiene aspects of Food handlers- Hygiene aspects in preparation and storage of food - dish washing and garbage disposal- Safety of leftover foods Methods of sanitation and hygiene

**Unit – III** Food Adulteration and Adulterants: Meaning, Methods to identify the presence of adulterants-Types of adulteration in various foods-Intentional, incidental and metallic contaminants - Consequences of adulteration

**Unit – IV** Safety in Food processing –Regulatory compliance requirement for establishment of food outlets - Frame work for enabling environment for serving safe and nutritious food at food establishment or outlets. Sterilization and disinfection using heat and chemicals – Solid and liquid waste management and disposal.

**Unit- V** Objectives of developing Food Safety and Standards- Enforcement of structure and procedure - Role of food analyst- good practices- statutory and regulatory requirements - Certification - HACCP, ISO-22000, FSSC-22000

### 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

## B.A. (Home Science) Semester V (DSC)

### Surface Ornamentations of fabrics (Theory)

Programme/Class: Degree	Year: III
<b>Course Code: HSC/DSC/UG 15</b>	
<b>Credits:3</b>	
<p><b>Course outcome: - 1:-</b>Students will gain a comprehensive understanding of traditional and contemporary techniques for embellishing fabrics, including embroidery, printing, dyeing, and appliqué.</p> <p><b>2:-</b> To provide students with in-depth knowledge of mechanical finishing processes used in textiles and materials, including their purpose, applications, and impact on fabric properties.</p> <p><b>3:-</b> To provide students with a thorough knowledge of the history, cultural significance, and</p>	

regional diversity of traditional embroidery techniques.	
Unit	Topics
I	<b>Textile Finishes</b> Definition, purpose, type, basic / routine /preparatory finishes, singeing, desizing, scouring, bleaching, stiffening, weighting, mercerization, carbonizing, sanforising
II	<b>Mechanical Finishes</b> Napping, Giggling, sue ding, glazing, raising, immersing, flocking, brushing, shearing, beating, tendering, calendaring, schreiner zing, moaring and embossing
III	<b>Functional Finishes</b> Waterproof and water repellency, shrinkage control, wrinkle resistance, durable press and flame retardant finish, mildew proof, soil resistance, anti-static, anti-piling, wash and wear, flame resistance, flame proof and anti-bacterial finish
IV	<b>Dyeing</b> (a) Classification of dyes- Natural v/s Synthetic, advantages and limitations(b)Theory of Dyeing(c)Properties and use of Dyes-Basic, Acidic, Direct, Azoic, Neutral, Sulphur, Vat, Disperse and Reactive dyes (d)Resist Dying Techniques-Tie-Die, Batik
V	<b>Printing</b> (a)Direct Printing- Block, Screen, Stencil, Roller (b)Transfer Printing (c) Discharge printing, Resist Printing (d)Polychromatic, Inkjet and Digital printing techniques(e)After treatment of dyed and printed goods
VI	<b>Introduction to various components required for hand- embroidery</b> Knowledge of basic hand embroidery, stitches- running, hemming (visible/invisible), back stitch, overcasting, catch stitch, button whole stitch, basting, slip stitch, satin, chain, herringbone, cross, French knot
VII	<b>Traditional Embroideries:</b> Meaning and status of traditional crafts of India, Knowing about the Traditional Embroideries of different states: Zardozi, Kashida of Kashmir, Phulkari of Punjab, Kantha of Bengal, Chikankari of UP, Kasuti of Karnataka, Sindh and Kutch work of Gujarat.
VII	Traditional Textiles: Knowing the Traditional textiles of different states of India(a) Woven fabrics- Baluchars, Brocades, Kashmir carpets, Patola, Ikat, Pochampalli, Chanderi (b) Printed, painted and dyed –Sanganeri, Bhagru, Kalamkari, Madhubani, Bandhani

**Suggested Readings:**

- Marsh JT: Textile Finishes
- Trotman Er: Dyeing and Chemical Technology of Fibers
- Joseph M: Introduction to Textiles
- Corbman P Bernard: Textiles- Fiber to Fabric
- Hollen & Saddler: Introduction to Textile
- J. Hall: The standard Handbook of Textiles, Wood Head Publication,2004
- J.E. Smith: Textile Processing-Printing, Dyeing, Abhishek Publishing,2003
- Kate Broughton: Textile Dyeing, Rockport Publishers,1996
- W.S. Murphy: Textile Finishing, AbhishekPublication,2000
- Naik.D.Shailaja,TraditionalEmbroideriesofIndia,NewAgeInternationalPublishers,1996
- Naik.D.Shailaja,Jacquie.A.Willson:SurfaceDesigningofTextileFabrics,NewAgeInternationalPublishers, 2006
- Bharga,Bela. VastraVigyaa,Univ.BookHousePvt.AvamDhulaiKala,UniversityBookHousePvtLtd.Jaipur
- Patni,Majnu,VastraVigyaaAvamParidhankaParichay,StarPublications,Agra.Suggestedigitalplatformsweblinks-

Swayam Portal,<https://heecontent.upsdc.gov.in/Home.aspx>

This course can be opted as an elective by the students of following subjects: Open for all

**Suggested Continuous Evaluation Methods**

- Seminar on any topic of the above syllabus
- Test with multiple choice questions/short and long answer questions.
- Subjective long questions
- Attendance

Course prerequisites: To study this course the student must have had the subject ALL in class/12<sup>th</sup>

### Practical (e) Techniques of Surface Ornamentation of Fabrics

Programme/Class: Degree	Year: III
Course Code: <b>HSC/DSC/UG 15</b>	
Credits: 1	
Unit	Topic
I	Demonstration of dry cleaning, visit to a commercial dry-cleaning unit/Textile mill.
II	Identification of labels.
III	Dyeing Techniques- Tie- Die, Batik
IV	Printing Techniques- Block, Screen, Stencil, Roller, Spray
V	Traditional Embroideries of different states: Zardozi, Kashida of Kashmir, Phulkari of Punjab, Kantha of Bengal, Chikankari of UP, Kasuti of Karnataka, Sindhi and Kutch work of Gujarat
VI	Preparation of different weaves on Cardboard

### Community Development and Programme Planning (Theory)

Programme/Class: Degree	Year: III
<b>Course Code: HSC/DSE/UG 016</b>	
<p><b>Course outcomes:</b></p> <ul style="list-style-type: none"> <li>• Understand the Community Development dynamics &amp; organizing system for Development.</li> <li>• Create awareness about the various development programmes.</li> <li>• Identify the leadership pattern in the community.</li> <li>• Impart skills to implement, monitor &amp; evaluate programmes</li> </ul>	
<b>Credits:4</b>	
<b>Unit</b>	<b>Topics</b>
<b>I</b>	<b>Community Development:</b> Meaning, Definition, Functions, Objectives, Philosophy, Principles of Community Development Programmes in India.
<b>II</b>	<b>Community Development Organization:</b> Meaning, Types, Principles, Role & Administrative Structure at the National, State, District, Block & Village levels.
<b>III</b>	<b>Home Science Extension Education in Community Development:</b> Origin, Concept, Need, Importance and Contribution of Home Science Extension Education in National Development.
<b>IV</b>	<b>Recent Development Programme for Women &amp; Children:</b> Support to training and Employment for women (STEP), Swarn Jayanti Gram Swarozgar Yojna (SGSY), Integrated Child development Services (ICDS) etc.
<b>V</b>	<b>Support Service of Youth Development:</b> NCC, NSS, Youth Camp, Youth Clubs etc.
<b>VI</b>	<b>NGO &amp; Other organizations:</b> Contribution towards community services, Types & Role of NGO-WHO, CARE, UNICEF, UNESCO, UNDP/CRY, HELP-AGE INDIA.
<b>VII</b>	<b>Leadership:</b> Concept, Definitions, Types, Importance, Function and Role of Community leaders, Methods of Identifying and Training of Leaders
<b>VIII</b>	<b>Programme Planning:</b> Meaning and importance of programme planning in extension, Principles of programme planning, programme development cycle and its components, -Designing the project-Defining the objectives, Identifying resources, approach, feasibility and Work plan. Implementation, Monitoring and Evaluation

## GENERIC ELECTIVE COURSE : RESOURCE MANAGEMENT FOR SUSTAINABLE DEVELOPMENT

**Cr. Hrs. 4 (Theory)**

**Course Code- HSC/GE/UG 017**

**Learning Outcomes** After completing the course, students will be able to:

- Build an understanding of environmental concerns, sustainable development and its challenges
- Understand the concept of resources and developmental issues with respect to sustainable development
- Develop skills in sustainable resource management

### **UNIT I: Introduction to Sustainable Development 10 hours**

- Concept of sustainable development
- Need, objectives and principles of sustainable development
- National and international milestones, initiatives, summits and protocols
- Sustainable Development Goals (SDGs)

### **UNIT II: Resources and Developmental Issues**

- Environmental concerns, population explosion, urbanization, globalization, economic development, ecological footprint, carbon footprint
- Perspectives in resource consumption
- Sustainable management of key resources: Land, green cover, water, air, waste
- Sustainable practices by industry, CSR initiatives
- Green buildings and green building rating systems

### **UNIT III: Sustainable Resource Management I**

- Energy management – star labelling, energy auditing, renewable energy
- Water management – Rain water harvesting- Calculation of rainwater harvesting potential, water auditing, waste water recycling, water testing

### **UNIT IV: Sustainable Resource Management II**

- Waste management – Waste to energy plants, waste to wealth • Air management – Air quality, AQI

### **UNIT V Measurement and Indicators of Sustainable Development**

Measurement tools of Sustainable Development- Gross National Happiness; Human development Index (HDI); Ecological Footprint (EF),

Indicators of Sustainable Development: Indicators of health; Indicators for zero hunger; Indicators of gender equality

### **Essential Readings**

1. Thakur, B., Thakur, R. R., Chattopadhyay, S., & Abhay, R. K. (Eds.). (2023). Resource Management, Sustainable Development and Governance: India and International Perspectives. Springer.

2. Prasad, R., Jhariya, M. K., & Banerjee, A. (2021). *Advances in Sustainable Development and Management of Environmental and Natural Resources: Economic Outlook and Opinions*. CRC Press, Taylor & Francis Group.
3. Goel, S. (Ed.). (2016). *Management of Resources for Sustainable Development*. New Delhi: Blackswan Publications.
4. Somayaji, G., & Somayaji, S. (2009). *Environmental concerns and sustainable development: some perspectives from India*. New Delhi: TERI Publication.
5. Sundar, I. (2006). *Environment and Sustainable Development*. New Delhi: APH Publishing Corporation

**B.A. (Home Science) Semester VI**

**Dietetics and Therapeutic Nutrition (Theory) (DSC)**

Programme/Class Degree	Year: III	Semester: VI
<b>Subject: Home Science</b>		
Course Code <b>HSC/DSC/UG/18</b>	Course Title: <b>Dietetics and Therapeutic Nutrition (Theory)</b>	
Course outcomes:		
<ul style="list-style-type: none"> <li>• Knowledge of principles of diet therapy</li> <li>• Develop and understand modification of the normal diet for therapeutic purposes</li> <li>• Practical knowledge of dietary management in some common disorders.</li> </ul>		
Credits:4		Core Compulsory
<b>Unit</b>	<b>Topics</b>	<b>No. of Lectures</b>
<b>I</b>	Introduction (a) Definition of Health Dietetics and Therapeutic Nutrition (b) Importance of Diet Therapy (c) Facts about fast foods/Junks foods (d) Objectives of therapeutic Diet (e) Principles of diet therapy	
<b>II</b>	Diet and feeding methods (a) Modification of normal diets for therapeutic purposes (b) (b)Methods of modifications <ul style="list-style-type: none"> <li>• On the basis of nutrients</li> <li>• On basis of consistency</li> </ul> (c) Different feeding methods <ul style="list-style-type: none"> <li>• Oral feeding</li> <li>• Tube feeding</li> </ul>	
<b>III</b>	Energy Metabolism (a) The calorific value of food (b) Measurement of energy exchange in the body (c) Factors influencing the Basal Metabolic Rate (d) Factors influencing total energy requirement of body	
<b>IV</b>	Diet during fevers and infections (a) Introduction to fever–Acute Fever, Chronic fever Important changes in nutrition during fever (c) Modification of the diet	
<b>V</b>	Diet during Digestive systems disorders (a)Peptic Ulcers-Causes, symptoms and diet modification (b) Diarrhea and Constipation-Causes, treatment and diet modification	
<b>VI</b>	Weight Management (a)Over weight and Obesity -Introduction to obesity	3

	-Causes of Obesity -Diet Modification (b)Underweight -Causes -Treatment -Diet Therapy	
<b>VII</b>	Therapeutic Diets in Cardiac Diseases (a) Atherosclerosis -Introduction -Dietary factors influencing lipid level in blood -Modification of diet and Meal Pattern (b) Hypertension -Causes and symptoms -Diet in Hypertension	

**Suggested Readings:**

- ❖ Sumati R Mudambi-“Fundamentals of food, Nutrition and Diet Therapy”, New Age International Pvt. Ltd, New Delhi, 6<sup>th</sup> Edition (2018).
- ❖ BSrilakshmi-“Dietetics”,New Age International Publishers, New Delhi2017.
- ❖ Bamji MS, Krishna swamy K and Brahman GNV (Eds) (2009),Text book of Human Nutrition, Edition, Oxford & IBH Publishing Co. Pvt. Ltd New Delhi.
- ❖ Dr.Brinda Singh-Aahar Vigyan evam Poshan, Panchsheel Prakashan, Jaipur, 2015; 13<sup>th</sup>Ed.
- ❖ Dr.Devinasahani,Samanya Evam Upcharatmak Poshan, New Age International Publishers.
- ❖ Dr.SheelSharma,“Nutritionand Diet Therapy”, PEEPEE Publishers and Distributers (P) Ltd. Delhi,2014, 1<sup>st</sup> Ed.
- ❖ ShubhanginiAJoshi,-“Nutritionand Dietetics”, McGraw Hill Education Private Ltd., NewDelhi,2013.
- ❖ KumudKhanna-“Textbook of Nutrition and Dielectric”, Elite Publishing House Pvt. Ltd, New Delhi,7<sup>th</sup> Ed. 2013.
- ❖ MS waminathan-Essentials of food nutrition, VoIII, Applied Aspects, The Bangalore Printing Publishing Co. Ltd, Bangalore, 2<sup>nd</sup>Edition 1985, Reprint1997.

**Suggested Continuous Evaluation Methods:**

- Test with multiple choice questions/short and long answer questions
- Menu Planning and calculation of nutrient requirement
- Seminar on any above topics

**Suggested equivalent online courses:**

IGNOU and other centrally/state operated Universities/ MOOC platforms such as “SWAYAM” India and abroad.

<http://heecotent.upsdc.gov.in/Home.aspx>

**Further Suggestions:**

- Students can opt. dietitian, nutrition advisor/Nutritionist as a career in private and government sector as well as extend knowledge by joining advance course in same discipline.

Course Code: HSC/DSC/UG/018	
Credits:2 1	
Unit	Topic
I	Modification of normal diet for therapeutic purposes, preparation and presentation
II	Therapeutic Diet preparation and Nutrient Calculation of -Diet in fever -Diet in diarrhea -Diet in Constipation
III	TherapeuticDietPreparationandNutrientCalculationofsome commonDisorders -Diet in Diabetes Mellitus -Diet in Hypertension -Diet in Atherosclerosis
IV	Dietary Modification for weight management-Preparation and Nutrient Calculation of diet in- -Over weight & obesity -Underweight

### Family Welfare and Community Education (Theory)

Programme/Class: Degree	Year: III	Semester: VI
<b>Subject: Home Science</b>		
Course Code: HSC/DSE/UG 019	Course Title: <b>Family Welfare and Community Education (Theory)</b>	
Credits:4	Core Compulsory	
<b>Course outcomes</b> <ul style="list-style-type: none"> <li>• Understanding about Children’s rights and National Policy for Children</li> <li>• Learning about Family and child welfare services working at national and international level</li> <li>• Understanding family relationship and Child Parent relationships</li> </ul>		
TotalNo.ofPeriods-60		
Unit	Topic	
I	Child and Family Welfare: Children’s rights and National Policy for Children. Demographic profile of child in India. Children with special needs. Deprived Children and abused children, juvenile Delinquency.	
II	Family and child welfare services working at national and international level; C.S.W.B., ICCW ICDS and others, W.H.O. UNICEF, CARE, and ILO.  Rural extension services and community ICDS, DWCRA, IRDP and CHEB	
III	Family relationship, Child Parent relationship, responsibilities of parts relationship of home, school and community.	
IV	The role of teacher and other specialists in parents and community education programmes. Teacher as motivator, community work, guidance of child, youth ethical consideration in dealing with parents <div style="text-align: right;">and community.</div>	
<b>Suggested Readings:</b> <ol style="list-style-type: none"> <li>1. Gangrade,K.D.(1971) Community Organization in India. Popular Prakashan, New Delhi</li> <li>2. Dahama, O.P. and Bhatnagar,O.P.(1980) Extension and Communication for Development, Oxford and IBH.</li> <li>3. State of World Children, UNICEF Annual Publication.</li> <li>4. HansNagpaul.(1980)Culture, Education and Social Welfare. Chand and Company, New Delhi.</li> <li>5. Chaudhry,D.Paul,(1980).Child Welfare and Development. NIPCCD, NewDelhi.</li> </ol>		
<b>Suggested Continuous Evaluation Methods:</b> <ul style="list-style-type: none"> <li>• Test with multiple choice questions/short and long answer questions</li> <li>• Menu planning and calculation of nutrient requirement.</li> </ul>		

**Suggested equivalent online courses:**

IGNOU and other central/state operated Universities/MOOC platforms such as “SWAYAM” in India and abroad Svayam Portal.

<http://heecontent.upsdc.gov.in/Home.aspx>

## Diet and Nutrition Counselling

### Generic Elective

#### HSC/GE/UG 20

#### I. Course outcomes

After successful completion of the course, the students will be able to

- Define Dietician and recall the qualities, role and responsibilities of a dietician
- Describes or explains the steps in diet and nutrition counseling
- Uses the skills in assessment of nutritional status of normal and diseased people
- Relate practical skills in dietary counseling of various health and disease conditions
- Develop teaching aids and uses computer applications and smart phones in diet counseling

#### II. Theory Syllabus

##### UNIT-1 Introduction to Dietitian and IDA

- Dietician – Definition and Educational qualification
- Types of Dietitians – Clinical, academic, research, specific, food service, public/Community, industrial, consultant, sports, business etc.
- Qualities, Role and responsibilities of Dietician
- IDA – Objectives, membership; Registered Dietician – eligibility for R.D. exam

##### UNIT-2 Diet Counselling/ Nutrition Care Process (NCP)

- Diet Counseling/ Nutrition Care Process (NCP) – Definition, importance, purposes and ethical principles
- Steps in Diet counseling Process; Documentation – SOAP
- Counseling Skills for a Dietitian; Tools of Dietitian; Guidelines for effective Counseling

##### UNIT-3 Counselling Approaches

- Counselling Approaches – Meaning, Developing a counselling approach
- Different Counselling Approaches – Psychoanalytical, behavioural, humanistic, Patient centered GALIDRAA approaches etc.

##### UNIT-4 Nutrition Education

- Nutrition Education – Meaning and importance,
- Teaching Methods and aids used for Nutrition Education in the Community  
Teaching Methods – Lecture, Group discussion, Role Play, Storytelling, Demonstrations, Nutrition Exhibition, Marathon race etc.
- Teaching Aids – Posters, pictures, models, charts, flash cards etc.
- Teaching Materials for patients – Models, pamphlets, leaflets, book

**UNIT-5 Use of Modern Technology in Diet Counselling**

- Use of Computers in Diet Counselling and Nutrition Education
- Use of Computer Applications and Mobile Applications in Diet Counselling and Nutrition Education; Computer and mobile applications available for Diet Counselling
- Pre requisites for setting up a Diet Counseling Center

**Project- Visit to a hospital and studying routine hospital diet and report writing****Preparation of teaching aids in the field of nutrition****Preparation of case history of a patient and feeding information and report writing****References**

- Srilakshmi, B. "Dietetics", 8<sup>th</sup> edition, 2018, New Age International Publishes, New Delhi
- IDA, Clinical Dietetics Manual, 2018, 2<sup>nd</sup> edition Elite Publishing House New Delhi
- Corinne H. Robinson, Marilyn R. Lawler, "Normal & Therapeutic Nutrition" 17<sup>th</sup> edition 1986
- Shubangini A Joshi, "Nutrition & Dietetics" 5<sup>th</sup> edition, 2022, McGraw hill Education India Pvt. Ltd.
- Judy Gable "Counselling Skills for Dietitians" 2<sup>nd</sup> edition, 2007, Black Well Publishing Ltd, Oxford, UK.
- "Clinical and Therapeutic Nutrition M.Sc." published by directorate of Distance Education, Swami Vivekanand Subharti University, Meerut, U.P.
- Linda Snetselaar "Nutrition Counselling Skills for the Nutrition Care Process" 4<sup>th</sup> edition, 2021, Jane and Bartlett Publishers, London

