

**Learning Outcomes-Based Curriculum Framework  
(LOCF)**

**for**

**Undergraduate Programme (Honours)**

**HOME SCIENCE**

**(2020)**



ज्ञान-विज्ञान विमुक्तये

**UNIVERSITY GRANTS COMMISSION  
BAHADUR SHAH ZAFAR MARG  
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## **PREAMBLE**

The role of education is paramount in nation building. One of the major objectives of UGC is maintenance of standards of higher education. Over the past decades the higher education system of our country has undergone substantial structural and functional changes resulting in both quantitative and qualitative development of the beneficiaries. Such changes have gained momentum with the introduction of Choice Based Credit System (CBCS) which further expects Learning Outcome-Based curriculum to maximize the benefits of the newly designed curriculum. The Learning Outcome-Based Curriculum in Home Science/ Family and Community Sciences will help the teachers of the discipline to visualize the curriculum more specifically in terms of the learning outcomes expected from the students at the end of the instructional process. The commission strives to promote the link of students with the society/industry such that majority of the students engage in socially productive activities during their period of study in the institutions and at least half of the graduate students will secure access to employment/self-employment or engage themselves in pursuit of higher education. The model curriculum envisages to cater to the developmental trends in higher education, incorporating multi-disciplinary skills, professional and soft skills such as team work, communication skills, leadership skills, time management skills and inculcate human values, professional ethics, and the spirit of innovation/entrepreneurship and critical thinking among students and promote avenues for display of these talents, linking general studies with professional courses. Besides imparting disciplinary knowledge to the learners, curriculum should aim to equip the students with competencies like problem solving, analytical reasoning and moral and ethical awareness. Introduction of internship and appropriate fieldwork/case studies are embedded in the curriculum for providing wider exposure to the students and enhancing their employability.

Learning outcomes specify what exactly the graduates are expected to know after completing a programme of study. The expected learning outcomes are used as reference points to help formulate graduate attributes, qualification descriptors, programme learning outcomes and course learning outcomes.

Keeping the above objectives of higher education in mind the Learning Outcome-Based Curriculum Framework (LOCF) for the discipline of Home Science has been prepared and presented here.

**FOREWORD  
BY CHAIRMAN**



**Learning Outcomes based Curriculum Framework  
(LOCF)  
for  
B .Sc./ B.A (Honours) Home Science  
Undergraduate Programme  
2020**

## **1.INTRODUCTION**

Home Science is both science and social science-art related multi-disciplinary field of study. The Learning Outcomes-based Curriculum Framework (LOCF) for B.Sc/B.A (Home Science) degree programme has been designed to integrate the application of sciences and humanities to create a cadre of home scientists to improve the quality of life of individuals, family, community and nation. Home science program is predominantly practical oriented and therefore helps to develop and polish various skills to empower the cadre required towards innovation, incubation and entrepreneurship along with professional and employable skills. Hands on experience with Project work/internship/fieldwork would help and build capacities for conducting primary research among the students. The curriculum has been structured to prepare the undergraduates to achieve skills to move forward with the development of the society/community/nation and entrepreneurship.

The Curriculum incorporates multidimensional fundamental, core and applied aspects of various disciplines with Graduate Attributes (GAs) such as disciplinary knowledge, laboratory/field driven practical's, the art of writing & communication, self-learning, critical thinking, analytical & problem solving abilities, use of ICT , application of knowledge, lifelong learning, research-related skills, team spirit, multicultural competencies, leadership qualities, global vision, professional commitment and sensitizing with Sustainable Development Goals (SDGs) of United Nations. It also aims to build future ready professionals who would be socially responsible global citizens contributing to the overall development of the country.

The model curriculum presented has a multidisciplinary approach keeping the New Education Policy of 2020 in mind.

## **2.LEARNING OUTCOMES-BASED APPROACH TO CURRICULUM PLANNING AND DEVELOPMENT: (LOACPD)**

### **2.1 Nature and extent of B.Sc/B.A. (Home Science)**

Higher education encourages technical know-how, utility skills, employability, a sense of responsibility and prosperity among the students of nation besides dealing with personality development and entrepreneurship. The fundamental premise underlying the learning outcomes-based approach to curriculum planning and development is that higher education qualification such as B.Sc/ B.A (Home Science) are awarded on the basis of demonstrated achievement of outcomes based on Bloom's Taxonomy (in terms of knowledge, understanding skills, attitudes , employability and values) and academic qualities expected from a graduate of professional programme such as B.Sc/ B.A. in Home Science. The learning outcomes specify what exactly graduates after successfully completing degree programme of study are expected to know, understand and able to practice at the professional level.

The expected learning outcomes are very important in present day context, as it helps to develop professional curriculum based on outcomes. Therefore, higher education degrees must formulate Graduate Attributes (GAs), qualification descriptors, learning outcomes and course learning outcomes which will help in curriculum planning and development in the form of design and delivery. The overall formulation of the curriculum has been developed keeping all these attributes to facilitate the competencies of the learner to match with the expectations of the employer.

The overall objectives of the learning outcomes-based curriculum framework are to:

- Help formulate graduate attributes, qualification descriptors, programme learning outcomes and course learning outcomes that are expected to be demonstrated by the holder of a qualification;
- Enable prospective students, parents, employers and other understand the nature and level of learning outcomes (knowledge, skills, attitude and values) or attributes a graduate of a programme should be capable of demonstrating on successful completion of the programme of study;
- Maintain national standards and international comparability of learning outcomes and academic standards to ensure global competitiveness, and to facilitate student/graduate mobility;
- Provide higher education institutions an important point of reference for designing teaching-learning strategies, assessing student learning levels, and periodic review of programmes and academic standards.

## **2.2 Aims of Bachelor's Degree Programme in Home Science subject**

### **Program education objectives**

Home Science with its new nomenclature of Family and Community Sciences is an inter disciplinary course encompassing variety of subjects with the result it covers all the branches of Home Science namely Food Science & Nutrition, Human Development & Family Studies, Resource Management, Textile & Clothing, Communication & Extension etc. Keeping the inter & multidisciplinary nature in mind the Program Educational Objectives (PEOs) have been given below

- To impart the fundamental knowledge in all the major domains of Home Science and related areas of studies.
- To develop competency in application of knowledge in different settings i.e. family, community, workplace etc
- To impart and develop skills for professional life
- To prepare for higher degree with specializations, create professionals in different related areas, foster research & development, teaching, government and public service and entrepreneurship.

### **3. GRADUATE ATTRIBUTES:**

The graduate attributes reflect the particular quality and feature or characteristics of an individual, including the knowledge, skills, attitudes and values that are expected to be acquired by a graduate of BSC (Honours) Home Science through studies at the higher education institution (HEI) .

The graduate attributes for the undergraduate students pursuing Home Science (Honours) Programme include capabilities that help them to strengthen their abilities for widening current knowledge base and skills, gaining new knowledge and skills in the specific areas of Home Science viz. Textiles and Clothing, Extension and Communication, Foods and Nutrition, Family Resource Management, Human Development and Family Studies, Environment and Personal development, undertaking future studies to bring solutions to the societal, family and personal problems, performing professionally well in



careers related to Home Science discipline and alike and playing a constructive role as a responsible member in the family and citizen in the society and nation at large.

The attributes of a graduate student of Home Science (Honours) programme define the characteristics of a student's university degree programme(s), and describe a set of characteristics/competencies that are transferable beyond study of a particular subject area and programme contexts in which they have been developed.

Graduate attributes are fostered through meaningful learning experiences made available through the updated curriculum, the total university experiences, and a process of critical and reflective thinking.

The characteristics attributes of graduates of Home Science (Honours) Programme include :

1. **Disciplinary knowledge and skills:** Capable in demonstrating basic theoretical and practical knowledge and understanding in subjects like:
  - a) **Textiles and Clothing** from Textile Chemistry and Engineering, Fine Arts, Textile designing, Garment production industries, Apparel retailing and merchandizing, Fashion Design, History.
  - b) **Extension and Communication** from Social work, Journalism, Mass Communication, Media production and promotion, Theatre, Law, Film Making.
  - c) **Food Science and Nutrition** from Physiology, Biology, Nutrition, Chemistry, Biotechnology, Microbiology, Dietetics, Medicine, Extension.
  - d) **Resource Management** from Resources, management, Architecture, Consumer, Economics, Commerce, Civil Engineering, Environment, Fine Arts, Design , Social Work, Law, Ergonomics , Physiology, Interior Design.
  - e) **Human Development and Family Studies** from Psychology, Sociology, Social Work, Pediatrics, Anthropology.
  
2. **Effective Communicator:** Ability to communicate precisely, confidently and with clarity among the rural and urban communities using attention seeking media on the various educational topics for creating awareness and making better lives .Competency to express thoughts and ideas through folk media, Social media, print media, PPT's, role plays ,displays and exhibitions along with oral and writing skills.

- 3. Critical thinking, Analytical reasoning and Problem solving :** Ability to employ critical thinking in identifying the problem, developing analytical skills and capabilities to resolve the problems efficiently related to all the five specific areas on a tailor made basis for a client, customer, an individual, family and society either independently or with the support of concerned authorities.
- 4. Research and Scientific reasoning:** Skills in undertaking small researches by way of Term paper, Case Studies, Market Surveys, Field visits, Laboratory Experiments etc. on the related topics/problems of the discipline and arrive at the results based on the scientific reasoning wherever applicable.
- 5. Cooperation/ Team Work:** Capability of working enthusiastically and united with the working teams in organizing events in the Department/ Faculty/ University/ Community, and accomplishing group work/ assignments / tasks by willing cooperation of all and well-coordinated group living through during educational visits.
- 6. Reflective thinking:** Ability to practice empathy and objectivity in dealing with the personal and community interactions and problems.
- 7. Digital Literacy:** Competency in accessing relevant and authentic information and data from Electronic media with a motive to learn and synthesize it on the given topics in Home Science discipline for academic and extension work presentation and to prepare computer aided designs by using the needed software's.
- 8. Self-directive learning:** Potential to complete the assigned projects successfully either at Residential / Commercial level or Community level by managing the resources independently and wisely.
- 9. Multicultural competence:** Ability to learn about different cultures by way of practicing traditions, traditional cooking, ethnic designing and stitching, developing itineraries, and making traditional arts.

**10 Moral and Ethical awareness/reasoning:** Development of a sense of moral responsibility and values to refrain from unethical practices such as plagiarism , fabrication, falsification, misinterpretation of the data, breaching intellectual property rights ,adopting unbiased and truthful actions and motivate to make efforts to save the Mother Earth.

**11. Leadership readiness/ qualities:** Persuasion to imbibe leadership skills by providing hands of experience to exercise the leadership skill. Evaluate and guide to practice and acquire the required acumen to lead successfully.

**12. Lifelong Learning:** Motivation to be updated regularly and consistently throughout the life with the content, concepts, theories, upcoming specializations/ fields, technologies, books ,avenues by self-paced and self-directed learning with a motive to achieve economic, social, cultural and personal development goals.

#### **4. QUALIFICATION DESCRIPTORS**

A qualification descriptor of Home Science ( Honours) undergraduate programme indicates the generic outcomes and graduate attributes expected for the award of the Bachelor’s degree with Honours in Home Science. The qualification descriptors also describe the academic standard for a specific qualification in terms of the levels of knowledge and understanding, skills and competencies and attitudes and values that the holders of the qualification are expected to attain and demonstrate in terms of actual outputs after acquiring B.Sc. (Honours) degree in Home Science. These descriptors also indicate the common academic standards for the qualification and help the degree-awarding bodies in designing, approving, assessing and reviewing academic programmes. The learning experiences and assessment procedures are expected to be designed to provide every student with the opportunity to achieve the intended programme learning outcomes. The qualification descriptors reflect disciplinary knowledge, professional skills and understanding of Home science discipline under five sub- areas as “Textiles and Clothing (TC)”, “Extension and Communication (EC)”, “Resource Management( RM)” , “Food Science and Nutrition(FSN)” and “Human Development and Family Studies (HDFS) including generic skills, and global competencies, that all students in different academic fields of study should acquire/attain and demonstrate. The students who will complete three years of full–time study of an undergraduate programme of study of Home Science will be awarded Bachelor’s Degree with

Honours. Some of the expected learning outcomes that a student should be able to demonstrate on completion of a degree –level programme includes the following:

The qualification descriptors for a Bachelor’s degree with Honours in Home Science include the following:

- Demonstrate (i) a systematic, extensive and coherent knowledge and understanding of an academic field of study as a whole and its applications, and links to related disciplinary areas/subjects of study; including a critical understanding of the established theories, principles and concepts, and of a number of advanced and emerging issues in the field of Home Science; (ii) procedural knowledge that creates different types of professionals related to the varied subject areas of Home Science , including research and development, teaching and government and public service; (iii) professional skills in varied areas related to Home Science and current developments in the academic field of Home Science, including a critical understanding of the latest developments in the area of specialization, and an ability to use established techniques of analysis and enquiry within the area of specialization.
- Demonstrate comprehensive knowledge about materials, including current research, scholarly, and/or professional literature, relating to essential and advanced learning areas pertaining to Home Science field of study, and techniques and skills required for identifying related problems and issues.
- Demonstrate skills in identifying information needs, collection of relevant quantitative and/or qualitative data drawing on a wide range of sources ,analysis and interpretation of data using methodologies as appropriate to the subject of Home Science for formulating evidence-based solutions and arguments.
- Use knowledge, understanding and skills for critical assessment of a wide range of ideas and complex problems and issues relating to the academic field of study Home Science.
- Communicate the results of studies undertaken in an academic field of Home Science accurately in a range of different contexts using the main concepts, constructs and techniques of the subject of Home Science.
- Address one’s own learning needs relating to current and emerging areas of study relating to Home Science, making use of research, development and professional materials as appropriate, including those related to new frontiers of knowledge in Home Science .

- Apply one's disciplinary knowledge and understanding relating to Home Science and transferable skills to new/unfamiliar contexts and to identify and analyse problems and issues and seek solutions to real-life problems.
- Demonstrate subject-related and transferable skills that are relevant to the Home Science related job and employment opportunities.

## **5. PROGRAMME LEARNING OUTCOMES IN COURSE**

Home Science is a science-oriented, multidisciplinary subject which encompasses the multifarious activities that occur in families, households, and communities. Over years, the discipline has evolved and expanded to encompass activities and services of relevance, not only to the micro contexts of the family and community, but also to the macro context of the larger society. Home Science is both multidisciplinary and interdisciplinary in its context encompassing the five major disciplines of Family Resource Management, Foods and Nutrition, Textiles and Clothing, Human Development, and Extension and Education. Each discipline has one or more specific areas of specialization. The term '**programme**' refers to the entire scheme of study followed by learners leading to a qualification which essentially is a combination of the five disciplines. Offering the Programme as a value-laden one needs to be reflected in The Programme Outcomes (PO) and the Programme Specific Outcomes (PSO) are for both regular B.Sc and B.Sc (Honours). Furthermore, specific programme outcomes pertaining to Bachelor's Degree in Home Science (Honours) are also delineated

### **Programme Outcome (PO) statements (Regular and Honours Degree in B.Sc in Home Science)**

- Deliver quality tertiary education through learning while doing.
- Reflect universal and domain-specific values in Home Science.
- Involve, communicate and engage key stakeholders.
- Preach and practice change as a continuum.
- Develop the ability to address the complexities and interface among of self, societal and national priorities.
- Generate multi-skilled leaders with a holistic perspective that cuts across disciplines.
- Instill both generic and subject-specific skills to succeed in the employment market.
- Foster a genre of responsible students with a passion for lifelong learning and entrepreneurship.

- Develop sensitivity, resourcefulness and competence to render service to families, communities, and the nation at large.
- Promote research, innovation and design (product) development favouring all the disciplines in Home Science.
- Enhance digital literacy and apply them to engage in real time problem solving and ideation related to all fields of Home Science.
- Appreciate and benefit from the symbiotic relationship among the five core disciplines of Home Science – Resource Management, Food Science and Nutrition, Textiles and Clothing, Human Development and Family Studies and Extension and Communication

**Programme Specific Outcomes – PSO:** On completion of the specific programme(Regular and Honours Degree in Home Science) following are the outcomes expected from students:

- I. Describe and analyze the discipline of Home Science as a holistic field of study covering multiple facets and requirements of human beings in day to day living, for example, achievement of appropriate milestones in personal development; awareness, need and use of family resources; access to adequate nutrition for wholesome development; clothing fundamentals and advances; and effective strategies for community extension and communication.
- II. Demonstrate skills/talents and proficiency in specialized areas of study.
- III. Demonstrate proactive networking in specific areas of study involving significant stakeholders including professionals, researchers, and public service personnel.
- IV. Address concern for the community (urban, rural and tribal) with genuine sensitivity and dedicate transferable knowledge and research findings for the benefit of the community.
- V. Develop sensitivity, resourcefulness, and competence to render service to enhance development of individuals, families, communities, and the nation at large.
- VI. Manifest a wide range of knowledge regarding sources of data (information) collection and transfer enabling exchange of ideas and notions; access to resources including e-resources and libraries; trends in knowledge gaining and transfer (teaching- learning processes); techniques of skill acquisition and understanding existing basic issues related to the disciplines in Home Science and methods to resolve and ratify them.
- VII. Demonstrate interest in engaging in active need based, innovative and community-oriented

research using appropriate methods, collect and process data and present evidence-based solutions and defend arguments related to the field of research in Home Science.

- VIII. Analyze and apply research findings for the use of societal needs and contribute to nation building strategies.
- IX. Demonstrate inclination toward acquiring knowledge and doing in-depth studies on allied subjects of Home Science, for instance Ergonomics in Resource Management; Chemistry in Textiles and Clothing.
- X. Demonstrate abilities involved in acting as proactive agents of change in promoting the discipline of Family and Community Sciences.
- XI. Explore and decide upon viable avenues of self-employment and entrepreneurship plus career options in different facets of Home Science disciplines.
- XII. Demonstrate ethical values in scholarship and social applications.

## **6. STRUCTURE OF B.Sc. HOME SCIENCE (HONOURS)**

### **Bachelor of Science in Home Science (Honours)**

S.No	Courses	Number of Courses	Credits per Course		Total credits
			Theory	Practical	
<b>1</b>	<b>Core</b>	<b>15</b>	<b>4</b>	<b>2</b>	<b>90</b>
<b>2</b>	<b>DSE</b>	<b>04</b>	<b>4</b>	<b>2</b>	<b>24</b>
<b>3</b>	<b>GE</b>	<b>03</b>	<b>4</b>	<b>2</b>	<b>18</b>
<b>4</b>	<b>Skill Enhancement</b>	<b>02</b>	<b>0</b>	<b>4</b>	<b>08</b>
<b>5</b>	<b>Ability Enhancement</b>	<b>02</b>	<b>4</b>	<b>0</b>	<b>08</b>
<b>Total</b>		<b>26</b>			<b>148</b>

Each domain (Area/branch of Home Science) will offer three Core papers (18 credits), four DSE papers (24 credits) and two Skill Enhancement papers (8 credits) making up a total of 50 credits each

**List of Courses framed under five areas of Home Science (Core/ DSE/SEC)**

<b>Branch of Home Science</b>	<b><u>Core Courses (6 Credits each 4 Theory +2 Practical)</u></b>
Textiles and Clothing	Introduction to Textiles Fundamentals of Clothing Construction Traditional Textiles and Costumes of India
Human Development and Family Studies	Fundamentals of Human Development Early Childhood Care and Education Developmental Challenges and Children with Disability
Food Science and Nutrition	Basics of Food Science and Nutrition Fundamentals of Human Physiology Family Meal Management
Resource Management	Resource Management Concepts and Contexts Planning and Designing Interior Space Family Finance and Consumer Behaviour
Extension and Communication	Communication and Extension Communication Model in Extension Participatory Program Management

<b>Branch of Home Science</b>	<b><u>Discipline Specific Electives (6 Credits each 4 Theory +2 Practical)</u></b>
Textiles and Clothing	Fashion Marketing and Merchandising Apparel Construction Textile Design and Illustration Dyeing, Printing and Finishing of textiles
Human Development and Family Studies	Childhood and Adolescence Adulthood and Aging Interpersonal Relationships and Family Dynamics Gender, Society and Human Development



Food Science and Nutrition	Nutrition for Health and Physical Fitness Medical Nutrition Therapy Food Safety, Sanitation and Hygiene Public Health Nutrition
Resource Management	Principles of Interior Design Designing and Furnishing Life Space Creative Applied Arts Garden and Landscape Designing
Extension and Communication	NGO Management Extension Management Communication for Development Community Development

<b>Branch of Home Science</b>	<b>Skill Enhancement Courses (4 Credits Practical)</b>
Textiles and Clothing	Surface Ornamentation CAD in Textiles and Apparel
Human Development and Family Studies	Life Skills Education Skills for Working with Children
Food Science and Nutrition	Techniques of Food Preservation Bakery Science
Resource Management	Computer Aided Interior Designing Art of Enterprising
Extension and Communication	Entrepreneurship Management Training and Professional Development

**Ability Enhancement Course (4 Credits Theory)**

AEC1: English

AEC2: Environmental Science

**Generic Elective (6 Credits each- 4 Theory +2 Practical)**

GE1: Basics of Research

GE 2: Statistical Methods for Social Sciences

GE 3: Academic Writing

GE 4: Basic Skills in Computer

GE 5: Personality Development

**Structure of B. Sc Home Science (Honours)**

**Proposed Scheme of Choice based credit system**

Semester	Core Course (CC)- (15)	Ability Enhancement Course (AEC) – (2)	Skill Enhancement Course (SEC) – (2)	Discipline Specific Elective DSE – (4)	Generic Elective (GE) -3	Credits
I	3* 6=18	2*4 =8				26
II	3 * 6=18				1* 6=6	24
III	3*6=18		1*4=4			22
IV	2*6=12		1*4=4	1*6=6	1* 6=6	28
V	2*6=12			1*6=6	1* 6=6	24
VI	2*6=12			2*6=12		24

**Distribution of Courses  
Conceptual Framework**

<b>Se m</b>	<b>CC 15</b>	<b>AEC 2</b>	<b>DSE 4</b>	<b>SEC 2</b>	<b>GE 3</b>	<b>Cr</b>
<b>I</b>	<b>CC-1</b> Basics of Food Science and Nutrition	<b>AEC-1</b> English  <b>AEC- 2</b> Environmen tal Science				<b>26</b>
	<b>CC-2</b> Fundamentals of Human Development					
	<b>CC-3</b> Introduction to Textiles					
<b>II</b>	<b>CC-4</b> Resource Management Concepts and Contexts				<b>GE1:</b> Basics of Research <b>GE2</b> Statistical Methods ?for Social Sciences	<b>24</b>
	<b>CC-5</b> Communication and Extension					
	<b>CC-6</b> Early Childhood Care and Education					
<b>III</b>	<b>CC-7</b> Fundamentals of Human Physiology			<b>SEC1</b> Surface Ornatmentation <b>SEC2</b> Life Skills Education <b>SEC3</b> Entrepreneurship Management <b>SEC4</b> Techniques of Food Preservation <b>SEC5</b> Computer Aided Interior Designing		<b>22</b>
	<b>CC-8</b> Fundamentals of Clothing Construction					
	<b>CC-9</b> Planning and Designing Interior Space					
<b>IV</b>	<b>CC-10</b> Communication Model in Extension		<b>DSE1</b> Fashion Marketing and Merchandising/ Childhood and Adolescence/ Nutrition for Health and Physical Fitness/ Principles of Interior Design/NGO Management	<b>SEC6</b> CAD in Textiles and Apparel <b>SEC7</b> Skills for Working with Children <b>SEC8</b> Training and Professional Development <b>SEC9</b> Bakery Science <b>SEC10</b> Art of Enterprising (Internship in any one)	<b>GE3:</b> Academic Writing <b>GE4:</b> Basic Skills in Computer	<b>28</b>
	<b>CC-11</b> Family Meal Management					
<b>V</b>	<b>CC-12</b> Participatory Program Management		<b>DSE2</b> Apparel Construction, /Adulthood and Aging/Medical Nutrition Therapy/Designing and Furnishing Life Space /Extension Management		<b>GE5</b> Persona lity Developmen t	<b>24</b>
	<b>CC-13</b> Developmental Challenges and Children with Disability					
<b>VI</b>	<b>CC-14</b> Traditional Textiles and Costumes of India		<b>DSE3</b> Textile Design and Illustration /Interpersonal Relationships and Family Dynamics/ Food Safety, Sanitation and Hygiene/ Creative Applied Arts/ Communication for Development <b>DSE4</b> Dyeing, Printing and Finishing of textiles/ Gender, Society and Human Development/ Public Health Nutrition/ Garden and Landscape Designing/Community Development (OR) Project			<b>24</b>
	<b>CC-15</b> Family Finance and Consumer Behaviour					
<b>To tal</b>	<b>90</b>	<b>8</b>	<b>24</b>	<b>8</b>	<b>18</b>	<b>148</b>

**Distribution of Courses**

**Core Courses (15 Courses to be taken)**

**(Credits: Theory 15x4=60, Practical 15x2=30)**

Three core courses have been planned from each area in the discipline of Home Science to provide an in depth understanding of relevant theories, concepts, and principles of this discipline. The students are likely to have a strong foundation in all the five branches of Home Science/ Community Sciences.

<b>Semester</b>	<b>Course Opted</b>	<b>Course Name</b>
I	CC-1 - Theory	Basics of Food Science and Nutrition
	CC-1 - Practical	Basics of Food Science and Nutrition
	CC-2 - Theory	Fundamentals of Human Development
	CC-2 - Practical	Fundamentals of Human Development
	CC-3 - Theory	Introduction to Textiles
	CC-3 - Practical	Introduction to Textiles
II	CC-4- Theory	Resource Management Concepts and Contexts
	CC-4- Practical	Resource Management Concepts and Contexts
	CC- 5- Theory	Communication and Extension
	CC- 5- Practical	Communication and Extension
	CC-6- Theory	Early Childhood Care and Education
	CC-6- Practical	Early Childhood Care and Education
III	CC-7- Theory	Fundamentals of Human Physiology
	CC-7- Practical	Fundamentals of Human Physiology
	CC-8- Theory	Fundamentals of Clothing Construction
	CC-8- Practical	Fundamentals of Clothing Construction
	CC-9- Theory	Planning and Designing Interior Space
	CC-9- Practical	Planning and Designing Interior Space
IV	CC-10- Theory	Communication Model in Extension
	CC-10- Practical	Communication Model in Extension
	CC- 11- Theory	Family Meal Management
	CC- 11- Practical	Family Meal Management
V	CC-12- Theory	Participatory Program Management
	CC-12- Practical	Participatory Program Management
	CC-13- Theory	Developmental Challenges and Children with Disability
	CC-13- Practical	Developmental Challenges and Children with Disability
VI	CC-14- Theory	Traditional Textiles and Costumes of India
	CC-14- Practical	Traditional Textiles and Costumes of India
	CC-15- Theory	Family Finance and Consumer Behaviour
	CC-15- Practical	Family Finance and Consumer Behaviour

**List of Discipline Specific Elective (DSE) 4 Courses Compulsory,**  
**01 each in IV & V Semester and 2 in VI Semester**  
**(Credits: Theory 4x4=16, Practical 2x4=8 Total=24)**

The course content is largely subject specific and will enhance their understanding of the different core areas of study. The courses are likely to help students acquire subject-specific, cognitive and transferable skills to solve complex problems

Semester	DSE	Branch of Home Science	Course name
<b>IV</b>	<b>DSE 1</b>	Textiles and Clothing	Fashion Marketing and Merchandising
		Human Development and Family Studies	Childhood and Adolescence
		Food Science and Nutrition	Nutrition for Health and Physical Fitness
		Resource Management	Principles of Interior Design
		Extension and Communication	NGO Management
<b>V</b>	<b>DSE 2</b>	Textiles and Clothing	Apparel Construction
		Human Development and Family Studies	Adulthood and Aging
		Food Science and Nutrition	Medical Nutrition Therapy
		Resource Management	Designing and Furnishing Life Space
		Extension and Communication	Extension Management
<b>VI</b>	<b>DSE 3 (Or) Project</b>	Textiles and Clothing	Textile Design and Illustration
		Human Development and Family Studies	Interpersonal Relationships and Family Dynamics
		Food Science and Nutrition	Food Safety, Sanitation and Hygiene
		Resource Management	Creative Applied Arts
		Extension and Communication	Communication for Development
	<b>DSE 4 (Or) Project</b>	Textiles and Clothing	Dyeing, Printing and Finishing of Textiles
		Human Development and Family Studies	Gender, Society and Human Development
		Food Science and Nutrition	Public Health Nutrition
		Resource Management	Garden and Landscape Designing
		Extension and Communication	Community Development

**Dissertation /Project work:** It is considered as a special Course involving application of knowledge in solving/analyzing/exploring a real-life situation/ difficult problem. A Dissertation/Project work would be of 6 credits. **A Dissertation work may be given in lieu of a Discipline Specific Elective paper in the sixth semester.**

**Skill Enhancement Courses (2 Courses Compulsory)**  
**(Credits: 2x4 Credits for Practical = 08)**

These courses aim to encourage and enhance the exploratory and analytical skills of students resulting in their ability to formulate problems clearly. These Courses would also be helpful in enhancing skills and provide confidence to start an enterprise or helpful in fetching jobs.

<b>Semester</b>	<b>Suggestive Courses</b>
<b>III</b>	Surface Ornamentation
	Life Skills Education
	Entrepreneurship Management
	Techniques of Food Preservation
	Computer Aided Interior Designing
<b>IV</b> (As Internship)	Computer aided design in Textiles and Apparel
	Skills for Working with Children
	Training and Professional Development
	Bakery Science
	Art of Enterprising

At least 02 skill enhancement courses to be opted, one in each SEM-III&SEM-IV (Can be combined with internship in related fields)

**Ability Enhancement Courses (2 Courses Compulsory)**  
**(Credits: 2x4=8)**

<b>Semester</b>	<b>Course</b>	<b>Course Name</b>
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I	AEC-1	English
I	AEC-2	Environmental Science

**List of Generic Electives (GE) 3 Courses Compulsory**  
**(Credits: Theory 3x4=12, Practical 3x2=6Total=18)**

<b>Semester</b>	<b>Course</b>	<b>Course Name</b>
<b>II IV &amp; V</b>	GE1	Basics of Research
	GE2	Statistical Methods for Social Sciences
	GE3	Academic Writing
	GE4	Basic Skills in Computer
	GE5	Personality Development

**6.1 Course Learning Outcomes**

Course Learning Outcomes delineate the significant graduate attributes and the qualification descriptors essentially to be acquired by the students in a very discrete nutshell highlighting four major sequels. They project the exclusive benefits students would accrue on completion of the Course. They emerge as reference points that had helped not only in designing the academic programme but also in delivery and review of the same. All syllabi – Course contents are prefixed with Course description, Course learning objectives and learning outcomes envisaged in framing the individual syllabi.

**6.2 Contents for Each Course**

Contents for Courses are given in a complete format under individual syllabi with specific notations for Code number of paper/ Course/ subjects, type of Course (Course nomenclature – Core, Ability Enhancement and the like), credits allotted for theory and practical etc. Further Course description, learning objectives, learning outcomes, Contents in uniform five Units of Theory followed by list of Practical is presented cogently in each template. Intended learning experiences and suggestive assessment methods and reading material as References have also been clearly spelt out.

### **6.3 References for each Course**

All Course contents or syllabi end up in an exhaustive list of References including textbooks, reference books, reading materials, e- resources, Journals, reports etc presented in APA format. Special attention was taken to see that the references recommended were of recent publication except certain unavoidable Textbooks of higher order belonging to old editions.

## **7. TEACHING LEARNING METHODOLOGIES**

Creating an enabling environment for students to enjoy autonomy in knowledge gaining and application remains a sustained objective of Learning Outcomes based approach to education. It is time the pedagogy changed from defending rote learning to associative and active learning. Framing a Curriculum incorporating feasible/essential practical interfaces facilitating attainment of well defined learning outcomes stands significant. Paradigm shift in focusing ideals of vision on knowledge transfer pedagogies appreciating conventional and modern teaching methods and interlacing with adequate supportive practicum and library resources (especially e-resources) and ICT enabled teaching and learning is the need of the hour. A judicious mix of both theoretical and practical exposure is what is envisioned now through lectures, tutorials, library use and e-learning on one hand coupled with project work, internships, training (skill orientation), field-based learning and laboratory experiments on the other. Unlike teacher-centric learning approaches motivation to students to pursue self-study, acquisition of subject-specific knowledge and skills and industry- Institute linkages to enhance learning ambience with a futuristic mission on employability (capacity building) and nation building receives supremacy. Thrust on digital literacy and add – on of extra credits is made open to all students. Learning experiences escalating their proficiency levels and reflecting their learning outcomes – knowledge, skills, attitudes and value systems – to the society, also help them shine in global competitiveness. The process strives to bring out student's value laden expressions of leadership, team spirit, self-motivation and coordinating qualities and sow the seeds for raising quest for lifelong learning. By imparting transferable skills the process envisions building a genre strong in generic and transferable skills. The teaching learning process in instilling qualities of healthy and quality living, resourcefulness, family dynamics, promotion of cultural and social aspects of Indian textiles, glimpse on Indian consumer and their behaviour, milestones of growth and development of individuals and the delicate strand of the



fragile society around spreads the milieu where the Programme on B. Sc Home Science (Honours) is vested.

## **8. ASSESSMENT AND OUTCOME MEASUREMENT METHODS**

Philosophy of higher education lies in laying proper inroads for a sandwiched pedagogy of domain – specific exploration and critical examination of the environment and people around through ample spicing of community sensitiveness. As the programme forms the threshold not only for efficient home making but also to glow in the employment market, assessment methods start with examining demonstrable performance parameters as in other Institutions. Thrust on comparable academic standards enable reviewing the Programme based on benchmarks ensuring pan India/ global performance levels and credits. Students need to *per se* demonstrate and reflect their graduate attributes by addressing / delivering domain-specific knowledge, abilities of reflective and critical thinking, problem solving, justifying rationale, innovation and research bend, peer group activities, digital literacy, quest for self-study, expressions of ethical and moral values, lifelong learning, e- learning, responsive citizenship, exposition of procedural knowledge and demonstrate value laden expressions of leadership, team spirit, self-motivation and coordinating qualities. Autonomy to choose extra credits and elective papers paves way for gaining credits more than what is expected.

## **8.1 CORE COURSES**

**CORE COURSE**  
**INTRODUCTION TO TEXTILES**  
**(Credits: Theory - 4, Practical-2)**

**Course Description**

An introduction to Textiles course covers the fundamental classification of the textiles along with the physical analysis of the fiber, yarn and fabric of different textiles. The course is designed to help the students understand the basics of textiles, the processes and technology used for manufacturing it. It explains about the properties and end uses of fiber, yarn, fabric and its co-relation. The course is based on systematic dissemination of textile science information followed by practical experiments for the students in the areas of identification of identification and properties, dyeing, printing and finishing treatments of textiles. This knowledge will be base for "Textile designing", "Garment technology", "Fashion designing", "Interior designing" courses. The course will be useful to those entering in textile related manufacturing, design and product development, selection, sourcing, quality control and research.

**Learning Objectives:**

- Obtain a broad understanding of textiles
- Develop understanding of technical terms involved in textiles.
- Get acquainted with the properties and uses of various textile fibers.
- Develop the skills for identification of fibers and fabrics
- Understand different types of yarns, weaves and finishes.
- Develop skills in making wise selection of textiles.
- Acquire knowledge of methods of laundry and stain removal.
- Learn the methods of dyeing, printing, and finishing of fabrics.

**Learning Outcomes:**

- Develop an understanding of concepts and basics of textiles.
- Understands and define the key textile terms.
- Develop critical understanding of the techniques of yarn and fabric manufacture.
- Identify the fibres, yarn and fabrics for its appropriate use.
- Analyze and asses dyed and printed textiles.
- Recommend the dyes, printing and finishing of textiles for specific use.

**Course Content**

**Unit-I. Introduction to Textiles**

- 1.1 Definition of textile fibers and terminology
- 1.2 Classification of textile fibers
- 1.3 Basic unit and polymer bonds in textile fiber
- 1.4 Physical and Chemical properties of fibers

**Unit-II. Fibers**

- 2.1 Natural fibers ( Morphology and polymer system, production, properties and end uses)
  - Cellulosic (Cotton, Jute)
  - Protein (Silk, Wool)
- 2.2 Man-made fibers ( Manufacturing process, chemical spinning, properties and end uses)
  - Viscose Rayon
  - Acetate Rayon
  - Nylon
  - Polyester
  - Acrylic
  - Elastomeric

**Unit-III. Yarn and Fabric**

## 3.1 Yarns

- Classification of yarns: simple, ply and cord
- Types of Yarn: Textured and novelty
- Twist in yarn: “s” and “z”, number of twist
- Properties of yarn: strength, extension, fineness, length, diameter, composition.

## 3.2 Woven fabrics

- Looms and its part
- Classification Basic weaves Plain, Twill, Satin.
- Novelty weaves – Pile, Leno-Gauze, Honeycomb
- End uses of fabrics with different weaves

## 3.3 Knitted fabrics

- Types and terminology used
- Hand knitting
- Machine knitting

### 3.4 Nonwoven fabrics

## **Unit-IV. Coloration and Finishing of Textiles**

### 4.1 Dyes

- Terms related to dyes
- Classification of dyes
- Components of dyeing and its relation to dye material (auxiliaries, temperature and dye bath)
- Direct, Acid, Basic and Reactive dyes

### 4.2 Printing

- Styles of printing
- Modern methods of printing
- Pre-preparation for printing (printing paste, printing table)

### 4.3 Finishing

- Basic finishes - Singeing, Scouring, Bleaching, Sizing, Weighting, Degumming, Mercerizing, Sanforizing and Calendaring
- Special finishes

## **Unit-V. Laundry, storage and care of textiles**

### 5.1 Introduction, Types, Uses

### 5.2 Water, Soaps, Detergents

### 5.3 Methods and care during laundering of different textiles

## **Practicals**

1. Fiber identification: Identification of natural and manmade fibers by following three methods i.e. microscopic test, burning test and solubility test.
2. Study of Yarn: Detail study of the ply of yarn, count of yarn using beesley yarn count balance, twist by twist tester, crimp by crimp tester and strength of the yarn by single yarn or lea strength tester
3. Characteristics of Fabric (following standards): Fabric count using pick glass, crimp using crimp tester, shrinkage, thickness, tensile strength(breaking strength and elongation) using tensile strength tester, tearing strength using tearing strength tester, bursting strength using bursting strength tester, weight (GSM) of the fabric.

4. Dyeing: Dyeing of yarn/fabric with different classes of dyes
  - a. Dyeing of cotton yarn and fabric with direct dyes
  - b. Dyeing of silk, wool and nylon yarn and fabrics with basic and acid dyes.
  - c. Dyeing of polyester yarn and fabric with disperse dyes.
5. Printing of fabrics using:
  - i. Direct style - block, stencil and screen
  - ii. Resist style - Tie &Dye, Batik
6. Care of Textiles
  - i. Stain removal
  - ii. Mending of textiles
  - iii. Starching using different types of starches

### **Learning Experience**

- Regular lectures, interactive sessions, demonstrations, ICT enabled teaching and learning experiences in terms of video lessons hand on experiences for fiber identification, yarn characteristics and ornamentation of textiles. Working fabric specimens (fabric swatches) will be used in conjunction with the assignments to enhance the combined textbook/hands-on format.

### **Evaluation**

- Unit test/theory exam/assignment/ swatch file/journal/evaluation of lab work

### **Reference**

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- Corbman, P.B. (1983). *Textiles: Fibre to Fabric*. McGraw-Hill Publishers.
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**CORE COURSE**  
**Fundamentals of Clothing Construction**  
**(Credits: Theory - 4, Practical-2)**

**Course Description**

The course provides basic principles for clothing manufacturing techniques. It is designed to develop skills in students related to body measurements using appropriate tools and preparation of fabric for clothing construction. It deals with the components of garments, material selection and techniques of construction. It further explains about the selection and use of sewing equipment. The knowledge of fundamentals of clothing construction will enable the students to make sound decisions related to material resources through the application of clothing construction and application skills. This will prepare students for advanced studies and professional employment in the areas of clothing and textiles.

**Learning Objectives:**

- Develop an understanding about the basics of clothing construction
- Learn about the principals involved in clothing construction.
- Know about various sewing equipment that are essential in a sewing room.
- Learns to construct articles.
- Develop skill in coordinating fabrics, patterns and supportive materials

**Learning Outcomes:**

A successful completion of this course will enable students to

- Understand basic principles of clothing construction.
- Comprehend the importance and function of clothes.
- Identify the common fabrics used for clothing construction
- Utilize design components in garment construction
- Gain an insight of various sewing machines and other sewing equipment's available in the market, their functioning & common problems faced while usage.
- Understands various garment construction process.
- Co-ordinates fabrics, patterns and supportive materials
- Construct the garment

**Course Content****Unit-I. Introduction**



### 1.1 History of Clothing.

Origin of Clothing

Use of clothing among primitive people

Functions and theories of clothing

Clothing in relation to culture

### 1.2 Psychological aspects of clothing

Self-respect, self-enhancement, self-expression, gender desirability and individuality

Socio-psychological aspects of clothing among children

Significance of uniforms and national costumes.

Clothes for conformity, mobility and aesthetic appearance.

### 1.3 Terminology : Clothing, fabric, fashion, fad, silhouette, weaving, knitting, felting, plackets, brands, clothing symbolism, tradition,

## **Unit-II. Sewing Machines**

### 2.1 Types of sewing machines

Mechanical Sewing Machine.

Electronic Sewing Machine.

Computerized or Automated Sewing Machine.

Embroidery Machine.

### 2.2 Parts of sewing machine

Types and function

Maintenance

Common problems and its remedies.

### 2.3 Tools and equipment used for clothing construction

Measuring tool

Drafting tool

Marking tool

Cutting tool

Stitching tool

Pressing tool

### 2.4 Needles, threads and their relation to fabric

Types of needles for hand and machine sewing

Types of threads hand and machine sewing

Selection of right thread, needle for the fabric to be sewn.

### **Unit-III. Introduction to Clothing Construction**

#### 3.1 Anthropometric measurements

Introduction and importance

Instruments used for anthropometric measurements

#### 3.2 Standardization and size charts.

Importance and use of size charts

Size charts of child, woman and man

#### 3.3 Factors affecting selection of fabrics

Social factors

Economic factors

Physiological factors

Environmental factors

### **Unit-IV. Design Components**

#### 4.1 Elements and Principles of Design

Introduction

Basic elements of design

Basic principles of design

Relation between elements and principles of design to the Clothing and Fashion

#### 4.2 Color, line and texture in relation to :

Age

Season

Occasion

Figure and

Complexion

## **Unit-V. Components of Garments**

### 5.1 Garment Silhouettes

### 5.2 Introduction to basic Garments

Skirts

Blouses

Pants

### 5.3 Introduction to Garment detailing for

Necklines

Fullness

Pockets

Seams

Sleeve

Yoke and

Plackets.

## **Practical**

1. Preparation of fabric for cutting
  - a. Preshrinking
  - b. Identification and straightening of Grain.
2. Taking measurements directly from body
3. Tools and Equipment used in Garment Construction: Squares and Scales, French curves – for armhole, necklines etc.
  - a. Preparing sample of:
4. Basic hand stitches- basting, back stitch, hemming visible/invisible, Lock stitch.
5. Seams- plain seams and decorative seams
6. Fullness
  - a. Darts-Single point, Fish dart
  - b. Tucks- Pin tucks, wide tucks, corded tucks, criss crossed tucks
  - c. Pleats- Knife, box, inverted box, accordion pleat
  - d. Gathers – Hand and machine

- e. Shirring
- f. Ruffles and frills
7. Neckline finishes- Binding and facing
8. Plackets: Faced and continuous bound
9. Pockets: Patch, in seam pocket
10. Snap button and fastener attachment
  - a. Introduction to drafting method and stitching of the following garments.
  - b. Petticoat/ Apron/Kalidar Kurta
11. Drafting on paper
12. Transferring pattern markings from paper
13. Fabric cutting
14. Stay stitching
15. Sewing on machine

### **Learning Experiences**

- Regular lectures, Videos, Presentations, films, Hands on experience for taking body measurements, making samples, operating sewing machine, construction of garments.

### **Evaluation**

- Class test, presentations and practical evaluations

### **Reference**

- Armstrong, Pearson. (1995), Pattern making for Fashion Design, Fairchild Publication, New York 1995 (Indian Ed.)
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- Dorothy wood, the practical encyclopaedia of sewing, Anness publishing Ltd, London.
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**CORE COURSE**  
**Traditional Textiles and Costumes of India**  
**(Credits: Theory - 4, Practical-2)**

**Course Description**

India has a diverse and rich textiles and costume tradition. Textiles and costumes of each states in India speaks volume of their culture. The course includes the traditional textiles and costumes from different regions of India. It deals with the history and designing details of each textiles and costumes. It also explains factors like changing times, social life, work style, seasons reciprocal cultural exchanges, physical features, cultural affinities, political history, religious beliefs and climatic conditions influencing the costume and textile designing. It gives hand on experience to create traditional embroidered samples.

**Learning Objectives:**

- Understand the Indian traditional history and its unique textile traditions
- Develops an understanding of the classification of traditional textiles based on the process of making it.
- Learn to differentiate traditional textiles from different parts of the country.
- Learns the characteristic features of the traditional costumes of different states of the India.
- Develop an understanding of the techniques of traditional embroidery

**Learning Outcomes:**

A successful completion of this course will enable students to

- Acquaint with Indian Textile and Clothing culture
- Analyze traditional textiles based on the process of making it.
- Understand the physical, geographical, cultural influence on costumes and textiles.
- Differentiates traditional textiles from different parts of the country.
- Appreciates the traditional Textiles and Costumes
- Utilize traditional costume and textiles in contemporary context.
- Understands the techniques of traditional embroidery.

**Course content****Unit-I. Introduction**

## 1.1 Textile Arts of India

Weaving and weaving communities, Embroideries, Rugs and carpets, Saris  
Shawls and wraps

## 1.2 History of Indian Traditional Textiles

Chronological development of spinning, weaving and dyeing  
Various trade routes

## 1.3 Classification of Traditional Textiles of India

Painted and printed, Resist dyed, woven and embroidered

## 1.4 Traditional Costume and Culture

Influence of historical, economic, political and socio cultural aspects on the evolution of traditional costumes.

**Unit-II. Ornamented and resist dyed textiles (Origin, material & techniques used)**

## 2.1 Pigment painted textiles

Patachitra, Pichhavi and Phad

## 2.2 Mordant painted textiles

Kalamkari-*Masulipatnam and Srikalahasti*, Mata-ni- pacchedi

## 2.3 Printed textiles

Hand block printed, Ajrakh, Rogan, Sanganer, Bagh

## 2.4 Yarn resist

Patola, Mashru, Ikat, Bandhana

## 2.5 Fabric resist

Sugadi, Bhandej, Laheriya

**Unit-II. Woven textiles (From Northern India)**

(Origin, material & techniques used)

## 3.1 Rajasthan – Kota Doria

## 3.2 Gujarat –Sujani, Tangaliya, Pachheddi

## 3.3 Madhya Pradesh – Chanderi, Maheshwari

## 3.4 Uttar Pradesh – Brocades

## 3.5 West Bengal – Dacca muslin, Baluchari Tangail,

3.6 Shawls from Kashmir, Assam and Nagaland

### **Unit-IV. Woven textiles (From Southern India)**

(Origin, material & techniques used)

4.1 Maharashtra- Paithani, Himroo

4.2 Andhra Pradesh and Telangana – Dharvaram, Venkatgiri, Gadwal and Narayanpet

4.3 Karnataka – Ilkal, Khann

4.4 Tamil Nadu- Kanjeevaram

### **Unit-V.Traditional Costumes of India**

5.1 Traditional costumes of Northern India Jammu and Kashmir, Punjab, Haryana

5.2 Traditional costumes of Western India Rajasthan, Gujarat, Maharashtra

5.3 Traditional costumes of Southern India Andhra Pradesh, Tamil Nadu, Kerala, Karnataka

5.4 Traditional costumes of Eastern India Orissa, West-Bengal, Assam, Nagaland, Meghalaya, Manipur, Arunachal, Mizoram, Tripura

5.5 Traditional costumes of Central India Uttar Pradesh, Madhya Pradesh and Bihar

### **Practical**

Learning the techniques of following traditional embroideries with emphasis on base material, threads and motifs used.

1. Kashida of Kashmir
2. Chambaof Himachal Pradesh
3. Phulkari and Bagh of Punjab
4. Chikankari of Uttar Pradesh
5. Kantha of Bengal
6. Embroideries of Manipur
7. Embroideries of Gujarat
8. Gold and Silver embroidery
9. Bead work

Preparation of portfolio with

- Pictures of traditional textiles with the descriptive analysis
- Pictures of the traditional costumes with constructional details.



- Samples of embroidery with its theoretical details.

### **Learning Experience**

- Regular lectures supported with visuals, visit to textile museum and demonstration of the embroideries and presentation of the traditional costumes of India

### **Evaluation**

- Class test/quiz/ practically identification of textiles/evaluation of practical work done/journal/presentations

### **References:**

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**CORE COURSE**  
**Fundamentals of Human Development**  
**(Credits: Theory - 4, Practical-2)**

**Course Description**

The course introduces students to the concept of human development. It then moves on to discuss the various schools of thought that gave rise to different theoretical frameworks to understand human development. It explains basic developmental principles and factors like heredity and environment which influence growth and development. It deals with development during different stages of life span, starting from conception to old age. It further discusses the principles of working with human beings and methods of studying human development.

**Learning Objectives**

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

**Learning Outcomes**

- Explain the need and importance of studying human growth and development across life span.
- Identify the biological and environmental factors affecting human development.
- Describe the characteristics, needs and developmental tasks of different stages in the human life cycle
- Explain the broad theoretical perspectives and frameworks of HDFS

- Apply the theoretical approaches to work with human being across life span

## **Detailed Course**

### **Unit-I History and Evolution of the Field of HDFS**

- 1.1 Who is a child? What is development?
- 1.2 History and future of the field of Human Development
  - Growth and development – concepts, determinants and principles
  - Principles of growth and development
- 1.3 Debates and issues in Human Development
  - Nature vs. nurture
  - Continuity vs. discontinuity
  - Organismic vs. Mechanistic
  - Plasticity
  - Individual differences
- 1.4 Perspectives in HDFS
  - Life Span and Life Course
  - Feminist
  - Evolutionary
  - Symbolic Interaction
  - Systems
- 1.5 Focus and scope of the discipline of HDFS

### **UNIT-II Theoretical Frameworks and Theories**

- 2.1 Theoretical Frameworks
  - Biological-maturational
  - Environmental learning
  - Constructivist
  - Culture-contextual
- 2.2 Overview of theories of human development
  - Freud's theory of psychosexual development
  - Erikson's theory of psychosocial development
  - Piaget's theory of cognitive development
  - *Bronfenbrenner's* ecological systems theory

- Vygotsky's Socio-cultural theory
- Learning theories (Watson, Skinner, Bandura)
- Indian Thinkers (selected) on Child Development
- Mahatma Gandhi
- Rabindranath Tagore
- Jiddu Krishnamurti
- Gijubhai Badeka and Tarabai Modak
- Hansa Mehta
- Amita Verma
- Sarojini Naidu
- Mina Swaminathan

### **UNIT- III Prenatal Development and Birth Process**

3.1 Prenatal Development – stages, factors affecting, diagnostics techniques

3.2 Birth Process

- Stages of birth
- Types of delivery (natural, c-section, breech, home vs. assisted delivery)

3.3 Immediate care of newborn, adjustments made by newborn, types of feeding - natural and artificial, weaning, infant and mother mortality and morbidity, immunization schedule.

### **UNIT-IV Stages in the Human Life Cycle: An Overview**

4.1 Characteristics, needs and developmental tasks of individuals in relation to physical, cognitive, socio- emotional domains of development in the following life stages:

- Neonate (birth-1 month)
- Infancy (1 month-2 years)
- Early childhood (2-6 years)
- Middle childhood (6-11 years)
- Adolescence (12-18 years)
- Emerging and Young adulthood (18-35 years)
- Middle age / mature adulthood (35-60 years)
- Late adulthood / Old age (60 years and above)

### **UNIT-V Professional Skills for working with Human Beings**

5.1 Research Methods

- Case study, interview, naturalistic observation, laboratory observation,

experimental methods, cross sectional and longitudinal and sequential studies.

- Ethics of research with human subjects – written consent, privacy, no harm, no plagiarism, debriefing

#### 5.2 Self-awareness and contextual sensitivity

- Building professional attitudes
- Understanding development in different contexts and circumstances
- Developing contextual sensitivity and preparation for field experiences
- Personal and Professional issues involved in a career as HDFS professional (Identify entry level jobs, career path and job tasks/requirements)

### **Practical(s)**

1. Preparation of an album on developmental milestones of children.
2. Visit to maternity ward and ante-natal clinics.
3. Visit to an *Anganwadi*
4. Plotting growth monitoring chart and interpretation.
5. Observation of motor activities of a toddler.
6. Visit to an old age home
7. Carry out case studies to know more about the different life stages, e.g., school going children, adolescents, middle adults.
8. Engaging in games and activities that enhance self-understanding in building professional skills.
9. Observations of infant child rearing practices in families from different social classes.
10. Interviews of adolescent girls and boys to understand their life style and behaviour based on gender and socio-economic status

### **Learning Experiences**

- Regular lectures, exercises on observation and follow up discussion, case studies, films and documentaries, group games and activities
- Films and documentaries about prenatal development and cultural variations in human development.
- Internet searches followed by class presentations on topics across the life span, for example, children's play, female feticide, condition of children from low socio-economic status, new born babies and infants, elderly, middle age, adolescent time use, peer pressure

## Evaluation

- Class test, presentation and one essay/take home based on observations

## References

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**CORE COURSE**  
**Developmental Challenges and Children with Disability**  
**(Credits: Theory-4, Practical-2)**

**Course Description**

The course introduces students to various disabilities in childhood years. It highlights aspects such as aetiology, characteristics and management of different disabilities. The educational practices in special education and inclusive education are also dealt. It also provides an overview of policies and laws related to disability

**Learning Objectives**

- Orient the students about the need and importance of studying children with different disabilities and how needs of these children differ from others.
- Develop an understanding and awareness of the basic terms, issues and concepts related to disability.
- Explain students about the educational and welfare programs, facilities and services available and the efficacy of the same.
- Develop sensitivity towards parental coping and acceptance of the situation concerning disability in the family.

**Learning Outcomes**

- Explain the need and importance of studying children with different disabilities.
- Describe the causes, the characteristics, assessment and intervention of various disabilities.
- Identify the common disabilities prevalent in childhood.
- Demonstrate first- hand experience of interacting and understanding children with disabilities.
- Distinguish the education patterns between children with disability and other children.
- Describe the coping strategies adopted by parents and family while dealing with children with

disabilities.

- Design academic and extra- curricular activities for children with special need.

## **Detailed Course**

### **UNIT- I Historical Background to Special Needs as a Discipline**

- 1.1 History of the field
- 1.2 Pioneers in the field
- 1.3 Emergence of special needs as a discipline
- 1.4 Present status of the field (with focus on special education and inclusion)

### **UNIT- II Introduction to Childhood Developmental Disorders and Disabilities**

- 2.1 Developmental disorders, disability, impairment, handicap: Concept and definition
- 2.2 Models of disability
- 2.3 Classifying disabilities
- 2.4 Social construction of disability
- 2.5 Demography of disability in India

### **UNIT- III Common Childhood Developmental Disorders and Disabilities**

Causes, Characteristic, identification, assessment and intervention with reference to:

- 3.1 Loco motor disability
- 3.2 Visual disability
- 3.3 Auditory and speech disability
- 3.4 Intellectual disability
- 3.5 Autism
- 3.6 Learning disability
- 3.7 ADHD
- 3.8 Cerebral Palsy
- 3.9 Social and Emotional Disability

### **UNIT-IV Family having Children with Disabilities**

- 4.1 Role of parents in upbringing special children



- 4.2 Parental acceptance and coping with the presence of special child in the family
- 4.3 Stages parents go through to come to the terms with the condition of the disabled child
- 4.4 Facilitating and debilitating parental behavior in the development of special child
- 4.5 Role of HDFFS professionals in dealing children with special needs.

## **UNIT - V Programs and Policies for Children with Disabilities**

- 5.1 Rights of the child with disability
- 5.2 Policy and laws related to children with disability
- 5.3 Interventions strategies adopted for children with disabilities
- 5.4 Issues related to policies and programs in the area of special needs in India

### **Practical(s)**

1. Visits to organizations working with children with disabilities.
2. Observing children with disabilities in families and institutions.
3. Planning developmentally appropriate material for children with disabilities.
4. Exploring audio-visual sources with reference to children with disabilities and their families.
5. Interview the teachers of special school and parents to find out about their experiences, hopes, attitudes and difficulties faced.
6. Gather information of latest trends, services available etc. through newspapers, magazine and other media.

### **Learning Experiences**

- Regular lectures, exercises on observation and follow up discussion, case studies, films and documentaries.

### **Evaluation**

- Class tests on theoretical concepts.
- One evaluation on practical field experiences.

### **References**

1. Balsara, M. (2011). *Inclusive education for special children*. New Delhi: Kanishka Publishers.

2. Berk, L. E. (2007). *Development through the lifespan*. Delhi: Pearson Education.
3. Chopra, G. (2012). *Early detection of disabilities and persons with disabilities in the community*. New Delhi: Engage Publications.
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6. Haring, N. G. (1974). *Behavior of exceptional children: An introduction to special education*. New Jersey: Prentice Hall Inc.
7. Hegarty, S., & Alur, M. (Eds.). (2002). *Education and children with special needs: From segregation to inclusion*. New Delhi: Sage.
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14. Sharma, N. (2010). *The social ecology of disability. Technical Series-3*. New Delhi: Academic Excellence.
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**CORE COURSE:****Early Childhood Care and Education  
(Credits: Theory-4, Practical-2)****Course Description**

This course explores the range of issues related to Early Childhood Care and Education (ECCE). The focus of the course is on understanding the importance of early years and early interventions. The course further aims to familiarize students with indigenous (Indian) models of ECCE, pedagogical approaches and programmatic trends as they evolved in the Indian context.

**Learning Objectives**

1. Know the importance of early childhood years and significance of intervention programs for early childhood development.
2. Develop insight into the historical developments – global and Indian including the current programs and policies in ECCE.
3. Develop awareness of ECCE programs in different contexts in India.
4. Familiarize with indigenous (Indian) models of Early Childhood Education and explore the current early childhood research, theoretical trends and issues. To learn about different curriculum models and pedagogical approaches in early childhood education.
5. Impart knowledge on programme planning for young children.

**Learning Outcomes**

1. Explain the importance of early childhood years and significance of intervention programs for early childhood development.
2. Describe the historical developments – global and Indian including the current programs and policies in ECCE.
3. Identify various indigenous (Indian) models of Early Childhood Education and apply it to understand the current early childhood research, theoretical trends and issues.
4. Analyze curriculum models and pedagogical approaches in early childhood education.
5. Create developmentally appropriate programs for young children.

## **UNIT-I Introduction to Early Childhood Care and Education**

1.1 Concept, meaning, scope and significance of ECCE

- Developmental perspective
- Neuroscience perspective
- Human rights perspective

1.2 Expansion from ECE to ECCE to ECD.

1.3 Aims and objectives of ECCE– General and specific

1.4 Types of ECCE service delivery – Formal and informal; Government funded, Philosophy oriented, Laboratory nursery school, Franchise oriented

## **UNIT-II ECCE in India**

2.1 History of Early Childhood Care and Education in India.

2.2 Overview of ECCE in pre and post-independence period. Preschool education in the pre and post-independence era (very brief). How the international trends have influenced the national trends.

2.3 Contributions of educational philosophers: global and Indian perspective- views of educationists and philosophers: Comenius, Rousseau, Pestalozzi, Froebel, Robert Owen, McMillan Sisters, John Dewey and Montessori, Sri Aurobindo, Tagore, GijubhaiBadheka, TarabaiModak, Mahatma Gandhi

2.4 Present status of young children in India.

2.5 Policy perspectives in ECCE

2.6 Recent Policies in ECCE-Variou Education commissions of India :

- National Policy on Education (1986) Programmes / schemes and innovations in ECCE – ICDS, Balwadis, mobile crèches
- National Curriculum Framework 2005
- National Policy on Early Childhood Care and Education 2013
- Curriculum Framework for Early Childhood Care and Education 2012/2013

2.7 New Education Policy, 2020

### **UNIT-III Early Childhood Curriculum**

- 3.1 Definition and concept of curriculum
- 3.2 Curriculum approaches – subject centered, learner centered, community centered
- 3.3 Developmentally Appropriate Practice (DAP) – definition and core considerations, myths and consequences of developmentally inappropriate ECE practices
- 3.4 Components and essential features of developmentally appropriate ECCE curriculum
- 3.5 Planning a developmentally appropriate curriculum- approaches, key principles and types of plans

### **UNIT-IV Play and its importance**

- 4.1 Play and its characteristics
- 4.2 Theories of play- surplus energy theory, recreational theory, recapitulation theory
- 4.3 Stages and types of play
- 4.4 Role of play in overall development of children
- 4.5 Teacher's role in creating environment and promoting play
- 4.6 Use of play way approach in the curriculum for young children.

### **UNIT-V Innovative ECCE Models**

- 5.1 Nutan Bal Shikshan Sangh, India
- 5.2 Daxinamurti Bal Mandir, India
- 5.3 Gram Bal Shikshan Kendra, India
- 5.4 Lok Jumbish Program, India
- 5.5 Mirambika, India
- 5.6 Rishi Valley, India
- 5.7 High/Scope Model, USA
- 5.8 Reggio Emilia Approach, Italy
- 5.9 *TeWhāriki* Model, New Zealand
- 5.10 The ECEC Model, Sweden
- 5.11 SetoGurans National Child Development Services, Nepal

## **Practical(s)**

1. Observation of early childhood programs at government and non-governmental institutions.
2. List the activities for each domain to promote all round development in young children.
3. Plan and record activities and methods of playful interactions to foster development in children (birth –two years and two –six years)
4. Conduct workshops in any two of the following:
  - 4.1 Developing worksheets to teach readiness concepts
  - 4.2 Enhancing social and language skills
  - 4.3 Music, movement and drama for children
5. Prepare a developmentally appropriate plan and its implementation
6. Methods and tools to assess progress of children and program
7. Prepare low cost play materials/equipment's

## **Learning Experiences**

- Observation of early childhood programs (government and private)
- Exercises on basics of ECCE program planning
- Observation of free play situations and classifying children's play

## **Evaluation**

- Regular class tests
- Presentations on select topics

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**CORE COURSE**  
**Basics of Food Science and Nutrition**  
**Credits: Theory-4; Practical-2**

**Course Description**

The course “Basics of Food Science and Nutrition” aims at developing the basic understanding of food and nutrition; it’s the effect on human health and newer advances in food technology. This course encompasses the physiological, biochemical and social aspects of food and discusses the relationship between metabolites and human health. Moreover, the Course is focused on the advances in the most emerging area of Applied Science of Nutraceuticals (where food is the medicine) and provides a detailed insight into understanding the composition, molecular interaction and bio mechanisms of food metabolites. The knowledge and skills to utilize food and nutrients are as the powerful tools for physical, mental and social well-being.

**Learning objectives:**

- Study the different methods of cooking foods
- Obtain knowledge of different food groups, their composition and nutrients present in the foods.
- Understand the vital link between foods, nutrition and health
- Gain knowledge on functions, requirements and effects of deficiency of nutrients

**Learning outcome:**

A successful completion of this course will enable students to

- Summarize and critically discuss and understand both fundamental and applied aspects of Food Science and nutrition.
- Able to explain functions of specific nutrients in maintaining health
- Identifying nutrient specific force and apply the principles from the various factors of foods and related disciplines to solve practical as well as Real world problems
- Use current information Technologies to locate and apply evidence-based guidelines and protocol and get imported with critical thinking to take leadership roles in the field of health, diet special nutritional needs and nutritional counseling.



## Course Content

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

1.1 Definition and Terms used in Food Science and Nutrition

1.2 Health, Food, Nutrition, Nutrients: Macronutrients (Carbohydrates, Proteins and lipids) and Micronutrients (Vitamins and Minerals), and Malnutrition

1.3 Various classifications of Foods and Food Groups

1.4 Definition, Classification and Functions of Foods, Basic Food Groups and Need for Grouping Foods and Application of Food Groups In Planning Adequate/Balanced Diets

1.5 Culinary terms and Methods of Cooking

- An Overview of culinary terms
- Different Modes of heat transfer like Radiation, Conduction and Convection
- Moist heat methods like Boiling, Simmering, Poaching, Steaming, Pressure cooking
- Dry heat methods: Air as medium of cooking: Grilling, broiling, roasting, Baking ,
- Fat as medium of cooking: Sautéing, Shallow fat frying, Deep fat frying
- Combined (Moist and dry) Methods: Braising, Stewing
- Other cooking methods:-Microwave cooking, and Solar cooking.
- Advantages and Disadvantages of Cooking methods

### **Unit-II. Nutritional Significance of different Food Groups**

Basic Concepts, classification, Composition, nutritive value and Role in Cookery

2.1 Cereals and Cereal Products- (a. Types of cereals: wheat, rice, millets, b) Cereal Products- Flaked rice, puffed rice, wheat flour) Principles and properties of Cereals and its utility: Germination (Amylase Rich Foods- ARF), fermentation, Parboiling, Gelatinization, Dextrinization, Gluten formation)

2.2 Pulses and Legumes

2.3 Fruits, and Vegetables,

2.4 Salt, Sugar and Jaggery

2.5 Nuts, oils and Oil seeds

2.6 Milk and Milk Products:includingFortified milk & its importance

2.7 Eggs-Basic structure of an egg and biological value, Quality evaluation and grading of eggs

2.8 Meat, poultry and fish

2.9 Spices & Condiments -Importance and functional properties of

### **Unit-III. Macronutrients**

Definition, Classification, Dietary Sources, Functions, Recommended Dietary Allowances, clinical signs and symptoms of Deficiency diseases and Excess of

3.1 Energy

3.2 Carbohydrates

3.3 Proteins

3.4 Lipids

3.5 Water

### **Unit-IV. Minerals**

Definition, Classification, Distribution of minerals in the body,

Functions, sources, requirements and effects of deficiencies of Minerals of

4.1 Calcium

4.2 Phosphorus

4.3 Magnesium

4.4 Sodium

4.5 Potassium

4.6 Selenium

4.7 Iron

4.8 Zinc

4.9 Iodine

4.10 Copper

4.11 Fluorine

### **Unit-V. Vitamins**

Classifications, functions, sources, Clinical signs and symptoms of deficiency, requirements of

5.1 Fat Soluble Vitamins - A, D, E and K

5.2 Water Soluble Vitamins-B Complex Vitamins- Thiamine, Riboflavin, Niacin, Pyridoxine, Folic acid, Cyanocobalamin and Vitamin C

### **Practical**

1. Market survey of locally available food items like cereals, pulses, fruits and vegetables, milk and milk products, fats and oils, nuts and oilseeds, sugar and jaggery, meat, fish, and poultry and miscellaneous food items like biscuits, jams, jellies, ketchup etc. and their cost
2. Classify foods on the basis of nutrients:-Protein, Iron, Calcium, Vitamin A, Vitamin C
3. Controlling techniques: Weights and measures - standard and household measures for raw and cooked foods
4. Weights and Measures, Determination of Edible Portion of Foods, preparing market order and table setting
5. Food Preparation, understanding the principals involved, nutritional quality and portion size of 5-7 commonly consumed recipes in each food group
  - Cereals: rice, pulao, Roti, chapathi, paratha, poori, pastas etc
  - Pulses: Whole, dehusked- Dal, sambar, kootu, Chole, Rajmah, etc
  - Vegetables: Dry preparations, Curries
  - Milk and milk products: Kheer , Custard,
  - Meat, fish and poultry preparations
  - Egg preparations- Boiled, poached, fried, scrambled, omelettes, egg pudding

### **Learning Experience**

- Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICT enabled teaching and learning experiences in terms of video lessons and documentary film shows. Hands on experience in laboratory

### **Evaluation**

- Announced and unannounced class tests, seminars and assignments and Record works related to their Practical works.

**Reference**

- Maney S (2008). *Foods, Facts and Principles*, 3<sup>rd</sup> Edition Published by Wiley Eastern, New Delhi.
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**CORE COURSE**  
**Fundamentals of Human Physiology**  
**(Credits: Theory-4, Practical-2)**

**Course Description**

This course is the science of how the human body functions in health and disease and examine human physiological systems from the molecular and cellular levels to the human body as a whole. This area of study uses basic science to measure human responses to internal and external stimuli (such as changes in activity levels, varying environmental conditions, and disease processes), and applies this knowledge to the promotion of human health.

**Learning Objectives:**

- Obtain an insight into the structure and functions of cells, tissues and organs in human body
- Understand the anatomy and physiology of the various systems in the human body
- Comprehend the functions of systems of the human body
- Gain knowledge on Endocrine, Nervous and Reproductive System

**Learning Outcomes:**

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

**Course Content****Unit-I. Introduction to Human Body**

- 1.1 Basic concepts of Organs, tissue and cell,
- 1.2 Cell structure, cellular organelle and their functions,
- 1.3 Blood- Composition, blood groups and Functions,
- 1.4 Structure and Functions of lymph System

**Unit-II. Cardiovascular System and Respiratory Systems****2.1 Cardiovascular System**

- Structure and functions of heart,
- Properties of Cardiac Muscle and Functional Tissues,
- Cardiac Cycle, Heart Rate, Cardiac Output, Blood Pressure (Systolic & Diastolic Blood pressure), ECG

## **2.2 Respiratory System**

- Physiological Anatomy of Respiratory Tract,
- Mechanism of Respiration,
- Transport of Respiratory Gases in Blood,
- Gaseous Exchange in Lungs and tissues

## **Unit-III. Digestive System and Excretory Systems**

### **3.1 Digestive System**

- Principal organs of the digestive system – Mouth, tongue, Teeth, Esophagus, Stomach, Small Intestine, Large Intestine, Rectum, Anus- structure & function
- Principal accessory organs- salivary glands, liver, gall bladder, pancreas- structure & function
- Role of gut hormones & enzymes in Digestion and mechanisms involved in absorption of food

### **3.2 Excretory System**

- Structure of Excretory System- Kidney, Nephron, Urinary Bladder
- Urine Formation, Composition of Urine, micturition, Glomerular Filtration Rate(GFR)

## **Unit-IV. Endocrine, Nervous and Reproductive System**

### **4.1 Endocrine Systems**

- Introduction to Endocrinology
- Functions and Hormones secreted by Pituitary Gland, Thyroid Gland and Parathyroid Gland and Adrenal Gland , Sex glands

- Endocrine Functions of Pancreas.

#### **4.2 Nervous System**

- Structure and functions of Neuron, Brain and Central nervous system( Autonomic Nervous System, Parasympathetic Nervous System

### **Unit-V. Reproductive System**

5.1 Structure, hormones secreted and functions of Male and Female Reproductive Organs

5.2 Physiology of Menstruation - estrogen verses progesterone

5.3 Pregnancy and associated changes

5.4 Physiology of lactation.

### **Practical**

1. Microscope and its uses
2. Histology of epithelial, connective, muscular and nervous tissues.
3. Find out RBC and WBC count
4. Determination of pulse rate in resting condition and after exercise (30 beats/10 beats method)  
Determination of blood pressure by Sphygmomanometer (Auscultator method).
5. Measurement of Peak Expiratory flow rate.
6. Determination of Bleeding Time (BT) and Coagulation Time (CT).
7. Detection of Blood group (Slide method).
8. Measurement of Hemoglobin level (Sahli`s or Drabkin method).

**\*\*\*As recommended by the Board of Studies of the University Learning**

### **Experiences**

- Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICT enabled teaching and learning experiences in terms of video lessons and documentary film shows.

### **Evaluation**

- Announced and unannounced class tests, seminars and assignments and Record works related to their Practical's.

**Reference**

- Chatterjee C.C (2016), *Human Physiology Volume I*, Medical Allied Agency, Kolkata
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**CORE COURSE  
FAMILY MEAL MANAGEMENT  
(Credits: Theory-4, Practical-2)**

**Course Description**

Course investigates how nutrition requirements and challenges change throughout the human lifecycle and how alteration in nutritional requirements impact on human health. The course also investigates the influence of nutrition prior to and during conception and to highlight the importance of good maternal nutrition during pregnancy and lactation and the impact of poor nutritional balance on fetal and infant development and maternal health. The course will cover the assessment of normal growth and body development during childhood and adolescence and will conclude with a full review of current literature and research on nutrient needs and factors affecting the nutritional status of adults and the elderly.

**Learning Objectives:**

- Study the growth and development during various stages of life span
- Understand the basics for recommending the dietary allowances
- Study nutritional needs at different stages of life span
- Gain experience in planning adequate diets for different age groups and for different income groups.

**Learning Outcomes:**

- Design food plans and assess the adequacy of diets to meet the nutritional needs of humans at various stages of life cycle.
- Assess nutrition issues and conditions and also recommend nutrition intervention and support to promote the health and wellbeing.
- Have the knowledge, both to develop and critique nutritional interventions designed to improve human health and well-being at specific age associated time points.
- On completion of the course students will be able to critically assess nutritional requirements and nutritional health status of an individual.

## **Course Content**

### **Unit-I. Introduction to RDA and Balanced Diet**

- 1.1 Basic concept and purposes of Recommending the Dietary Allowances,
- 1.2 Factors Affecting Recommended Dietary Allowances
- 1.3 Requirements and Recommended Dietary Allowances for various age groups
- 1.4 Uses of ICMR- RDA in planning balance diet
- 1.5 Exchange system and Dietary Diversity

### **Unit-II. Nutrition in Pregnancy and Lactation**

- 2.1 Physiological Changes occurring during Pregnancy
- 2.2 Importance of Food and Nutritional Care and Requirement during pregnancy
- 2.3 General Dietary and nutritional Problems and Complications,
- 2.4 Physiology and Hormones involved in Lactation
- 2.5 Food supplements and galactogogues.
- 2.6 Factors Affecting the Volume and Composition of Breast Milk,
- 2.7 Nutritional Requirements during lactation

### **Unit-III. Nutrition in Infancy**

- 3.1 Growth and Development of Infants,
- 3.2 Composition of Human Milk and Human Milk Substitute,
- 3.3 Bottle Feeding and related Problems,
- 3.4 Weaning and Supplementary Feeding Foods,
- 3.5 Feeding Problems and Complications.
- 3.6 Use of growth charts and standards and prevention of growth faltering

**Unit-IV. Nutrition in Childhood and Adolescence**

- 4.1 Growth and Development of Pre School, School Going Children and Adolescence.
- 4.2 Food and Nutritional Requirements,
- 4.3 .Factors to be considered while Planning Diet for Children and Adolescents,
- 4.4 Growth Spurt during Adolescence.
- 4.5 Food Habits, Dietary Guidelines, Food and Nutritional Requirements,
- 4.6 Nutritional and Behavioral Problems and Eating Disorders

**Unit-V. Nutrition for Adults and Elderly**

- 5.1 Reference Man and Reference Woman,
- 5.2 Food and Nutritional Requirements for Adults doing Different Activities
- 5.3 Processes of Aging,
- 5.4 Food and Nutritional Requirements of Elders,
- 5.5 Nutrition Related Problems of Old Age,
- 5.6 Dietary Guidelines and diet Modifications.

**Practical****Practical / Related Experience**

1. Planning, Preparing and Evaluating Menu during Pregnancy
2. Planning, Preparing and Evaluating Menu during Lactation
3. Planning, Preparing and Evaluating Menu for Infants (Supplementary Foods)
4. Planning, Preparing and Evaluating Menu for Preschoolers
5. Planning, Preparing and Evaluating Menu for School Going Children
6. Planning, Preparing and Evaluating Menu for Adolescents
7. Planning, Preparing and Evaluating Menu for Adults
8. Planning, Preparing and Evaluating Menu for Elderly

**\*\*\*As decided by Board of Studies of the university.**

### **Learning Experiences**

- Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICT enabled teaching and learning experiences in terms of video lessons and documentary film shows.

### **Evaluation**

- Announced and unannounced class tests, seminars and assignments and Record works related to their Practical's.

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**CORE COURSE**  
**Resource Management Concepts and Contexts**  
**(Credits: Theory-4, Practical-2)**

**Course Description**

Resources and their management is the ultimate goal of all families. The Course introduces the conceptual and contextual meaning of resources and their management in micro level family settings in the changing world in a simple format with experiential learning to the learners. Presenting optimal initiatives and equipping students with appreciable management acumen to imbibe the contexts in their family system and the environment is the major scope.

**Learning Objectives**

- Learning to identify and manage the use of resources available for functional use
- Comprehending the purpose of managing resources
- Setting realistic goals and being practical and prudent in the use and management of limited resources by making intelligent decisions
- Becoming money, time and energy conscious in daily living

**Learning outcomes**

- Understanding on the concepts related to family resource management
- Appreciation of the significance of management process in efficient use of resources
- Imbibing nuances of human values and standards for successful management and decision making
- Focus on management of human energy as a family resource

**Unit I Introduction to Resource Management in Family Settings**

- 1.1 Introduction to home management- meaning, definitions, conceptual framework, need and philosophy
- 1.2 Concept, definition, universality and scope of family resource management
- 1.3 Approaches to resource management – family resources Vs home management
- 1.4 Ethics in management of resources – essential qualities for success
- 1.5 Motivating factors in management – Values, Standards and Goals – meaning, types/

classification and influences.

- 1.6 Theories of Motivation- Maslow's hierarchy of needs theory; human wants – nature and role in management

## **Unit II Resources**

- 2.1 Concept, classification and characteristics of family resources
- 2.2 Factors affecting utilization of family resources
- 2.3 Maximizing use of resources and resource conservation.
- 2.4 Natural resources: renewable and non – renewable resources, methods of harnessing renewable resources for residential use

## **Unit III Functions of Management: An Overview**

- 3.1 Decision Making- the crux of management, Types of decisions; factors of control, role of values, standards and goals in decision making process
- 3.2 Management process: Definitions and steps in management process: Planning, Controlling, Organizing and Evaluation
- 3.3 Significance of managing resources of the family
- 3.4 Relation of Family Resource Management to other areas of Home Science

## **Unit IV Resource Management Process**

- 4.1 Management process applicable to specific resources:
- 4.2 Money- sources of income, meaning of income and expenditure, steps in money management, Budgeting- budget items, methods of handling money
- 4.3 Time – concept of time schedule, time norms and peak loads
- 4.4 Energy – Types of effort (Manual, pedal, visual etc)., Concept of body posture, drudgery and fatigue, fatiguing activities, classification of activities (sedentary, moderate and heavy), use of labour saving devices in management of time and energy, methods of alleviating fatigue
- 4.5 Principles of Work simplification, Mundel's Classes of Change, time and motion studies, working heights at different levels

**Unit V Ergonomics: Role in Management of Human Resources**

- 5.1 Ergonomics – concept and principles, work, worker and work environment relationship, role of work, workplace and equipment's (appliances) as sources of drudgery
- 5.2 Occupational health hazards – sources, problems and solutions
- 5.3 Waste management: home level solid and liquid waste management practices
- 5.4 Application of Management Processes in:
- 5.5 Event Planning & Execution

**Practical**

1. Comprehend and give a write up on values held and goals set – different age groups
2. Identify resources in and around a family, their use and benefits accrued: Prepare an Inventory
3. Harnessing natural resources: model making – solar devices, windmills, rainwater harvesting, water conservation measures
4. Conservation of community and natural resources for optimization: Portfolio
5. Identification and development of self as a resource.
  - SWOC analysis-who am I and Microlab
  - Building Decision Making abilities through management games
  - Role play
  - Goal setting exercise for one academic year
6. Elucidate changing value systems in Indian conditions – pros and cons
7. Preparation of time plans for self and family
8. Drafting family budget for different income groups
9. Time and Motion Studies for simplifying work- Flow process chart etc
10. Ergonomic analysis of different work, work places and appliances as sources of drudgery
11. Trial experiments on time and energy management using different household appliances
12. Determining working heights for different individuals at different levels
13. Planning an Event - management and evaluation, with reference to
  - Managerial process
  - Resource optimization - time, money, products, space, human capital and natural resources

## Learning Experiences

- Lectures, demonstrations, role plays, debates, field visits, blended teaching-learning, projections, ICT enabled learning experiences

## Evaluation

- Class tests, assignments, records, portfolio presentation, model making

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**CORE COURSE**  
**Planning and Designing Interior Space**  
**(Credits: Theory-4, Practical-2)**

**Course Description**

Shelter and the living space enclosed within are the determinants of healthy, safe and satisfied living. The Course is a launch pad for the students to understand the rudiments of functional as well as aesthetic designing of interior spaces so as to render them more livable and comfortable for occupants. The Course further facilitates experiential learning on designing spaces

**Learning Objectives**

- Develop comprehension on the nuances of design, design elements and principles
- Draft house plans based on standard guidelines and principles
- Understand space design organization for optimum comfort and functionalism.
- Evaluate residential interior space for aesthetic and ergonomic feasibility

**Learning Outcomes**

- Practicing knowledge gained on selection of site and building principles in real life situations
- Enable reading and comprehending building plans, evaluating and drafting them
- Examining market trends, merits and demerits of building materials and finishes
- Appreciate principles of design and the contributing factors and refine personal aesthetic senses

**Course Content****UNIT I: Design Fundamentals in Designing Interior Space**

- 1.1 Life space and Proxemics – significance in interior space designing
- 1.2 Concept and meaning of aesthetics, perception and good taste in designing
- 1.3 Interior design Vs interior decoration
- 1.4 Design: Definition, types and classification
- 1.5 Plastic elements - elements of design – application in interiors
- 1.6 Rudiments of design - Principles of design – application in interiors

**UNIT II: Aesthetic and Functional Considerations in Designing Interior Space**

- 2.1 Colour – definition, colour spectrum, Prang Colour system, classification of colours, colour harmonies – use and application in interiors. Factors influencing choice of colours
- 2.2 Furniture – definition, importance, classification, styles, use, factors influencing selection and placement, case goods Vs upholstered furniture, ergonomically designed furniture, modular units, multi - purpose furniture; concept of furniture detailing
- 2.3 Lighting – Sources, kinds and types of lighting, requirements of good lighting, use/ role, brightness - measurement for adequacy, avoidance of glare and shadow
- 2.4 Soft furnishings in the interior – definition, classification and use in different areas; window treatments- hard and soft
- 2.5 Accessories in the interior – definition, functions, use and classification; role in completing a design needs in an interior
- 2.6 Creating interface between interior and exterior - Introducing flower arrangements, indoor plants, Bonsai and hydroponics

### **Unit III: Concept of Housing**

- 3.1 Definition, importance and functions of a house; Family's housing needs; Housing as a symbol of standard of living
- 3.2 Sustainable Development Goals (SDGs) - Pollution and Environment protection, Acts (EPA)
- 3.3 Housing shortage and housing problems in India
- 3.4 Housing standards- role of ISI and BIS
- 3.5 Residential structural features of Indian houses and cultural influences

### **Unit IV: Constructional Considerations in Designing Interior Spaces**

- 4.1 Selection of site for houses: Factors influencing and legal aspects
- 4.2 Principles of planning, space allocation and organization in independent houses, apartments and flats
- 4.3 Building materials: materials for foundation, construction and finishes – types, characteristics and use
- 4.4 Concept of green buildings and eco-friendly materials as modern trends in building construction
- 4.5 Levels of construction and components of a building
- 4.6 Spatial organization in interiors: work zones, space bubble and schematic diagram

- 4.7 Symbols used in drafting plans, reading plans and blueprints
- 4.8 Types of plans – site, floor, cross-section, elevation, landscape, perspective
- 4.9 Drafting plans – concept drawings for different income groups; functional designs to suit different age groups and purposes; designs for people with special needs (PWD)
- 4.10 Ergonomics in designing kitchens, the nerve centre of the house: role of anthropometry, working heights, work triangle- significance in drafting various kitchen layouts and designing modular kitchens
- 4.11 Modular coordination and prefabrication
- 4.12 Housing finance: Availability and supporting agencies - Government and non-governmental agencies

## **5.1 UNIT V: Building Services in an Interior**

- 5.2 HVAC
- 5.3 Plumbing
- 5.4 Wiring
- 5.5 Waste disposal methods and provisions
- 5.6 Rain water harvesting units
- 5.7 Safety features – concept of BIMs, IAQ, fire safety, exhausts/ alarms
- 5.8 Ergonomic considerations ensuring health and safety of inmates
- 5.9 Fixtures, fittings and operating shutters
- 5.10 Spatial organization considerations with special reference to people with disabilities (PWD)

### **Practical**

1. Brainstorming on current trends in interior design
2. Market Study on:
  - furniture construction and detailing, availability and cost of different types of furniture
  - Availability and popularity of eco-friendly materials
  - availability and cost of building materials and finishes
3. Submission of layout drawings for different rooms & furniture using cut outs

4. Developing 2D and 3D designs for furniture and rooms
5. Area arrangement - Interior design for different rooms as mock up spaces
6. Visits to:
  - hotels, restaurants, conference hall, corporate offices to study significant differences in designing of interiors and space organization
  - BIS office to gain knowledge on basic standards
  - HUDCO and Housing Board offices to learn about Scheme Rules and housing standards
7. Evaluation of art objects
8. Drawing exercises: development of motifs, illustrations for different kinds of designs, use of various elements and principles (of design) in designing objects, room arrangements etc
9. Lecture cum demonstrations - Use of elements and principles of design in making accessories of functional and aesthetic value like pottery, paintings (different types), floor decorations, flower arrangement
10. Hands-on experiences – collage, decoupage, papermache objects, macramé, posters, greeting cards, Bonzai, hydroponics
11. Planning lighting for residential and commercial spaces specifying requirements
12. Learning drafting symbols and reading/judging house plan exercises
13. Drawing a kitchen layout considering anthropometric data of an individual
14. Drawing house plans for different income groups
15. Determining the IAQ status in different rooms in the Institution and analyze daily bulletins for comparative study over a month
16. Analyzing spatial needs/ organization in different business establishments, small to 5 Star and above hotels, corporate offices, educational institutions etc
17. Working drawings
  - ✓ Drawing sketches-two dimensional and three dimensional
  - ✓ Prang colour system, Colour harmonies, Colour schemes for various rooms
  - ✓ Model making – window treatments, furniture and art objects
18. Submission of a complete record

## **Learning Experiences**

- Lectures, blended learning, projection techniques (slides, OHP), ICT based learning, flipped classroom

### **Evaluation**

- Case study, surveys, field visits, record submission, drawing/ painting / rendering exercises, area arrangement, class tests, brainstorming sessions

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## **CORE COURSE**

## **Family Finance and Consumer Behaviour (Credits: Theory-4, Practical-2)**

### **Course Description**

Consumer is the king in the consumer market. Consumers' behaviour and attitude reflects their living styles which *per se* will be the delineation of their family finance management practices. The Course exposes students to real life situations for realizing their role as consumers as well as financial managers in family settings

### **Learning Objectives**

- Provide situations to understand significance of family income and expenditure and saving for future
- Register and react as responsible consumers
- Analyze relevance of consumer movement in India
- Gain knowledge on consumer protection Laws and Acts and reflect upon personal rights and responsibilities

### **Learning Outcomes**

- Becoming familiarized to the changing trends in consumerism
- Enriched Knowledge on market systems
- Emerge as informed consumers
- Review the benefits of planned financial management

### **Unit I Consumer and the Market**

- 1.1 Consumer: definition and meaning; consumer Vs customer
- 1.2 Role of consumers in the economy, National Income, Per Capita Income, Household wise distribution of income
- 1.3 Classification of Consumer goods
- 1.4 Consumer and the market: definition and classification of markets, types
- 1.5 Consumer demand and supply
- 1.6 Channels of distribution
- 1.7 Consumer behaviour: changing nature of consumer behaviour to suit modern market and



business trends – concepts of C2C, B2B, B2C, C2B etc; Factors influencing Consumer behavior

- 1.8 Meaning, characteristics of buyer behaviour, buying motives – types; consumer buying process;
- 1.9 Change in consumer purchase practices in the digital market – concept of e-commerce, m-commerce, online shopping etc; Extended use of plastic currency and cards

## **Unit II Household Income and Expenditure**

- 2.1 Household Income – Types, Sources, Supplementation of family income, use of family income, per capita income
- 2.2 Household expenditure: Items of expenditure, mental and written plans, Factors influencing expenditure pattern, expecting exigencies and tackling them
- 2.3 Account maintenance: methods of account keeping like balance sheets, account books, ledgers, income-expenditure records
- 2.4 Process of budgeting- steps in drafting a family budget, balancing income and expenditure, ways to meet emergent expenses
- 2.5 Personal finance management: Tax implications: significance in budgeting, measures adopted and instruments used to ensure tax benefits, calculation of personal income tax for an individual's monthly income
- 2.6 Engel's Laws of consumption, drafting well balanced family budgets

## **Unit III: Family Savings and Credit practices**

- 3.1 Consumer credit- Concept, meaning, need, sources, credit cards, credit services availed by the family members, types of loans availed by families
- 3.2 Mortgages: Definition and conceptual meaning, significance in meeting emergent needs of expenditure
- 3.3 Financial security arrangements: Family savings and investments- need ,principles, channels of investment
- 3.4 Savings and savings institutions, merits and demerits of each
- 3.5 Guidelines for wise savings practices

**Unit IV: Consumerism in India**

- 4.1 Consumerism: genesis, reasons for consumer movement
- 4.2 Historic Declaration of Consumer rights
- 4.3 Consumerism in India
- 4.4 Consumer problems – types, nature , causes and solutions
- 4.5 **Concern for the Consumer : Consumer education:** Meaning and definition; need and scope, objectives, aspects, methods, contents and resources, Problems
- 4.6 Consumer education and empowerment: meaning, need and achievements with specific relevance to India
- 4.7 Consumer aids: classification – Labels, Trademarks, Brand Names, Patents, Warranty, Guarantee, Quality Control and After Sales Service, Government and Voluntary Agencies,
- 4.8 Role of advertisements influencing consumer behaviour
- 4.9 Product labeling and packaging – significance to fair practices
- 4.10 Unfair consumer practices: adulteration and faulty weights and measures
- 4.11 **Green Consumerism**-Meaning and importance with respect to consumerism, need, consideration in daily consumption and significance,ethos of adopting sustainable/eco-friendly lifestyle as green consumers

**Unit V: ConsumerProtection**

- 5.1 Consumer protection: concept, need and significance
- 5.2 Consumer rights and responsibilities in India
- 5.3 Consumer organizations – origin, functioning, role and types
- 5.4 Consumer cooperatives – role, history and growth in India
- 5.5 Consumer redress: role of consumer forums and consumer courts in safeguarding consumers
- 5.6 Basic legislative framework for consumer protection in India- Consumer Protection Act 1986 (COPRA) , Alternative redressal mechanisms, Mediation centres
- 5.7 Standardization and quality control measures: Role of ISI, FPO, AGMARK, ISO, Eco mark, Wool mark, Silk mark, Cotton mark, Handloom mark, BEE Star labeling and others

## 5.8 Consumer Protection Act 2019

### **Practical**

1. Evaluation and designing of advertisements in the print media including products, services and social ads.
2. Evaluation and designing of informative and attractive labels for different type of food products.
3. Case study of banks and post offices to understand their services and products
4. Learning to fill different bank forms for depositing money, start fixed deposit or recurring deposit
5. Analysis of consumer redress through case study approach under CPA.
6. Food adulteration tests
7. Debates on:
  - Consumer credit – merits and demerits
  - Online shopping – advantages and disadvantages
  - Credit and debit card usage – pros and cons
8. Visit to consumer Forums and consumer courts to understand their operational procedures
9. Visit to ISI regional office and learn their nexus of operation
10. Identify various marks of significance like Hall mark, wool mark, silk mark etc and know the complex modes of identity clauses
11. Visits to various types of consumer markets to find out how they function
12. Do an elaborate Market study to identify labels and packaging and the information transfer expected in different consumer products
13. Learn to distinguish one mark from another from the logo and colour of logo like eco labels, green labels
14. Calculate taxable income and accruing tax for an individual whose occupation, monthly income, savings and like are specified
15. Compare provisions made in Consumer Protection Act 1986 with COPRA 2019

### **Learning experiences**

- Lectures, active learning, reflective learning, written exercises, collaborative learning,

problem solving, projection methods (OHP, slides)

### **Evaluation**

- Surveys, drafting model budgets, market study, calculating taxable income, field visits, comparative studies

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## **CORE COURSE**

## **COMMUNICATION AND EXTENSION (CREDITS: THEORY-4, PRACTICAL-2)**

### **Course Description**

The Course introduces to the students the concept of Communication and Extension. It will orient the students with creation, transmission and application of knowledge designed to bring out planned changes in the behavior of people. Communication is an exciting and challenging field of human interaction.

### **Learning Objectives**

- Understand the concept of Communication and its role in exchange of information
- Examine the models and barriers to communication
- Learn about the concept of extension, extension approaches and models
- Enhance the students in the selection and use of media in different socio-cultural environment

### **Learning Outcomes**

- Gain knowledge on the need and importance of communication and its significance in exchange of information
- Analyse the models of Communication and role of media in societal development
- Perceive the importance of extension education
- Acquire knowledge on the extension models and approaches

### **Course Content**

#### **Unit-I. Communication Concept**

- 1.1 Meaning, definition, nature, scope and importance of communication
- 1.2 Functions of communication – information function, command or instructive function, influence or persuasive function and integrative function.
- 1.3 Elements of Communication – three elements – source, message, receiver, four elements – encoding, decoding, sender and receiver, five elements – communicator, communicate, message, channel and feedback
- 1.4 Means of Communication – Oral, Written, Sign / signal, action, object
- 1.5 Types of Communication – Formal and Informal Communication
- 1.6 Pattern - one way, two way, circular

- 1.7 Communication media – Print and electronic media
- 1.8 Advantages and Limitations of communication media

## **Unit-II. Communication Models**

- 2.1 Importance of communication in extension
- 2.2 Models of Communication-Aristotle Model, Shanon – Weaver Mode, Berlo Model, Scharmm Model
- 2.3 Concept, purposes and significance of model in communication
- 2.4 Barriers to Communication – semantic, psychological, organizational and personal

## **Unit-III. Effective Communication**

- 3.1 Characteristics – Clear, correct, complete and precise message, reliability, consideration of the recipient
- 3.2 Skills – Observance, clarity and Brevity, Listening and Understanding, self-efficacy and self confidence
- 3.3 Significance – Team work, Team building, problem solving and decision making skills, facilitate creativity and reduces misunderstanding
- 3.4 Concepts relating to communication – perception, fidelity, communication gap, Empathy, Homophily, heterophily

## **Unit-IV. Communication and Extension**

- 4.1 Concept, need, functions, principles and scope of extension
- 4.2 Steps in extension teaching
- 4.3 Elements of extension communication system
- 4.4 Communication methods in extension – group method, mass method and individual method
- 4.5 Advantages and limitations of communication and extension

## **Unit-V. Extension Models and Approaches**

- 5.1 Models – Innovation transfer model, Social education model, Indigenization model, Social action / conscientation models, Empowerment participation model, Combination models

5.2 Approaches – General Extension, Commodity specialized, Training and visit, Agricultural, Extension participatory, project, farming systems development, cost sharing and Educational Institution approach

### **Practical**

1. Developing skill in planning and conducting small group communication
2. Preparation of Communication Models
3. Apply communication methods in the implementation of programme
4. Interaction with villagers and understand the felt and unfelt need
5. Carryout a case study using any one Extension approach

### **Learning Experiences**

- Regular lectures, exercises, group discussion, team building exercise, case studies and field visit.

### **Evaluation**

- Class test, presentation, assignments, seminars, records and report

### **References**

- Dahama, O.P and Bhatnagar O.P. (1995). Education and Communication for Development. New Delhi: Oxford and IBH Co.
- Gupta, D. (2007). Development Communication in Rural Sector. New Delhi: Mukhopadhyay Abhijeet Publication
- Nisha, M. (2006). Understanding Extension Education. New Delhi: Kalpay Publications
- Reddy, A.A. (2001). Extension Education. Bapatla: Sri Lakshmi Press
- Rogers Everett, M. (2003). Diffusion of Innovations, 5<sup>th</sup> Ed. New York: The Free Press
- Singh, U.K and Nayak, A.K. (2007). Extension Education. New Delhi: Common Wealth Publishers
- Wilson, M.C., and Gallup, G. (1955). Extension Teaching Methods. Washington: US Department of Agriculture

**CORE COURSE**  
**Communication Model in Extension**  
**(Credits: Theory -4 Practical-2)**

**Course Description**

The Course enables the students to understand the concept and process of communication. Apply knowledge of communication and be able to evaluate the theoretical approach used in the inter disciplinary field of communication and learn the concept of diffusion of innovations and adoption.

**Learning Objectives**

- Understand the concept and process of communication for development
- Acquire skill in information education and communication
- Learn the concept of diffusion and acquires skill to transfer the Innovation
- Strengthen the knowledge of traditional and modern media in development communication

**Learning Outcomes**

- Explain the basic concept, nature and significance of Communication model
- Learn the communication channel and skill
- Analyze the media in development communication
- Understand the adoption and diffusion process to help the extension agents to accelerate them

**Course Content****Unit-I. Communication Model**

- 1.1 Concept of communication model and significance
- 1.2 Functions – teaching elements of communication process, conducting research, predicting the success of failures of communication process.
- 1.3 Importance of communication model – easy understanding of communication process, showing information flow, introducing the parts of communication process, easy presentation of communication process and understanding the communication process.



## **Unit-II. Methods of Communication**

- 2.1 Extension methods of communication – Individual method – Farm and home visit, farmer’s call, personal letter, adaptive or minikit trial, farm clinic
- 2.2 Group method – result demonstration, method demonstration, group meeting, small group training, field day or farmer’s day and study tour
- 2.3 Elements of extension communication system – communicator, message, channel treatment and presentation, audience, audience response
- 2.4 Characteristics of change agent – empathy, linkage, structure, synergy, energy, proximity, openers
- 2.5 Role and competencies of change agent – broad knowledge, operational and relational knowledge, sensitivity and maturity, authenticity

## **Unit-III. Media in Development Communication**

- 3.1 Traditional media – types (folk songs, drama, and puppetry) characteristics and role in development communication
- 3.2 Radio – Origin and history, news, features and commentaries, role in development communication
- 3.3 Television and cinema – history, features and role in development communication
- 3.4 ICTs – scope and development communication

## **Unit-IV. Diffusion of Innovations**

- 4.1 Diffusion-concept, elements of diffusion, difference between communication and diffusion
- 4.2 Innovation - form, functions and meaning of innovation, perceived attributes of innovation, preventive innovation

## **Unit-V. Adoption**

- 5.1 Definition, adoption process – diffusion network – the innovation decision process, the innovation decision period, rate of adoption, mandates for adoption, over adoption, adopter categories, measurement of adoption, role of extension agent in the adoption and diffusion of innovation.

### **Practical**

1. Preparation of charts, posters, flash cards

2. Preparation of IEC material on various topics for different
3. target audience
4. Project preparation on specific area in development communication
5. case studies in development communication

### **Learning Experiences**

- Regular lectures, exercises on innovations and adoption and group discussion, case studies, films and documentaries

### **Evaluation**

- Class test, seminar, project preparation, report and records

### **References**

- Gupta, D. (2007). Development communication in Rural Sector. New Delhi:
- Meenakshi Raman and Sangeetha Sharma. (2013). Technical Communication-Principles and Practice. New Delhi: Oxford University Press  
Mukhopadhyay Abhijeet Publication
- Nair, R. (1993). Perspectives in Development Communication. New Delhi:
- Nisha, M. (2006). Understanding Extension Education. New Delhi: Kalpay Publications
- Parveen Pannu and Yuki Azaad Tomer. (2012). Communication Technology for Development. New Delhi: International Publishing House Pvt Ltd.
- Ray, G.L. (2015). Extension Communication and Management. Ludhiana: Kalyani Publishers
- Reddy, A.A. (2001). Extension Education. Bapatla: Sri Lakshmi Press
- Rogers Everett, M. (2003). Diffusions of Innovations. 5th Edition. New York: Sage Publication
- Singh, U.K. and Nayak, A.K. (2007). Extension Education. New Delhi: Common The Free Press, Wealth Publishers

**CORE COURSE**  
**PARTICIPATORY PROGRAMME MANAGEMENT**  
**(CREDITS: THEORY-4, PRACTICAL-2)**

**Course Description**

This Course is extended to equip the students with both specialized knowledge and practical skills in participatory project planning, monitoring and impact. Improving strategic thinking and decision making skills of students in planning, implementing and evaluating various programmes related to developmental sector is further envisaged.

**Learning Objectives**

- Understand the concept and process of programme planning
- Comprehend PRA techniques adopted in the villages to locate local resources
- Learn the Characteristics, tools and techniques of evaluation and recording
- Gain knowledge on project management techniques

**Learning outcomes**

- Understand programme planning and related models
- Identify the needs of the community and develop programmes
- Analyze techniques of implementing a programme
- Examine assessment of programmes and documentation.

**Course Content****Unit-I. Concept of Extension Programme Planning**

- 1.1 Meaning, nature, scope and principle of programme planning
- 1.2 Elements, functions and criteria for developing a plan
- 1.3 Importance of planned change
- 1.4 Programme development cycle and its components

**Unit-II. Participatory Planning**

- 2.1 Importance of peoples' participation in programme planning.
- 2.2 Formation of Self Help Groups.
- 2.3 Role of women in project planning and management

- 2.4 Principles, methods, tools and techniques of PRA and application of PRA methods in field studies.
- 2.5 Supportive techniques – secondary sources, direct observation, and semi structured interviews, case studies and stories, drama, games, role play, scenario, workshops, triangulation, continuous analysis and reporting.
- 2.6 Presentation techniques – Ranking, scoring and diagrammatic

### **Unit-III. Project Management Techniques**

- 3.1 Project management techniques
- 3.2 Strength, weakness, opportunity and challenges (SWOC)
- 3.3 Network analysis –critical path method (CPM), Programme (project) Management and Review Technique (PERT)
- 3.4 Technical and monitory support from Government and non-governmental organizations availability and access
- 3.5 Project management and evaluation and documentation
- 3.6 Training personnel in PRA techniques

### **Unit-IV. Extension Evaluation and Follow up**

- 4.1 Definition, nature, types, purpose and characteristics of evaluation
- 4.2 Phases, tools and techniques of evaluation, uses of evaluation
- 4.3 Need and methods of follow up
- 4.4 Analysis of existing extension programmes, prospects for improvement

### **Unit-V. Documentation**

- 5.1 Need for reporting and recording
- 5.2 Types of records
- 5.3 Analysis and document preparation
- 5.4 Procedures for recording – records and registers to be maintained
- 5.5 Training personnel in PRA techniques, project management, evaluation and documentation.

### **Practical**

1. Application of PRA methods in the real life situations.

2. Critical review of evaluation studies on women and rural development programmes.
3. Analysis of monitoring and evaluation of developmental programmes.
4. Preparation and implementation of home improvement work plan.
5. Evaluation of work plan using evaluation techniques.
6. Organizing and evaluating programmes for women and children at village level.

### **Learning Experiences**

- Regular lectures, case studies, exercises, observation and follow up, discussion, field visits.

### **Evaluation**

- Class test, Presentation and records, model preparation and seminars.

### **References**

- Bandarkar, P.I. and T.S. (2000). Methodology and Techniques of Social Research. Mumbai: Himalaya Publishing House
- Dhama, O.P, and Bhatnagar O.P. (1991) Communication for Development. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd
- Narayanaswamy, N. (2009). Participatory Rural Appraisal: Principles, Methods and Applications. New Delhi: Saga Publications
- Neeta Mekherjee. (1997). Participatory Rural Appraisal: Methodology and Applications. New Delhi: Concept Publishing Company
- Pankajam, G. (2000). Extension-Third Dimension of Education. New Delhi: Gyam Publishing House
- Prasanna,C.(1980). Project Planning, Appraisal, Budgeting and implementation. NewDelhi: Tata Megow Hill Publishing Company Ltd
- Ray, G.L. (2015). Extension Communication and Management. Ludhiyana: Kalyan Publishers.
- Sandhu, A.S. (2015). Extension Programme Planning. New Delhi: Oxford & IBH Publishing Co.Pvt.Ltd

**8.2DISCIPLINE SPECIFIC ELECTIVE COURSES**

**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Fashion Marketing and Merchandising**  
**(Credits: Theory 4 & Practical 2)**

**Course Description**

The course introduces students to the business aspects of fashion with a focus on fashion marketing and merchandising. It focuses on learning to capture the attention, of potential customers and promoting required products and services to them. It deals with how to understand, predict, and respond to consumer wants and behaviours to maximize business sales and revenue.

**Learning Objectives:**

- Determine how business of fashion identifies its target market and adapts to deliver the desired satisfactions to the ultimate customer.
- Learns the product / merchandise presentation to potential customers.
- Understand the buying and selling of goods for the purpose of making a profit.

**Learning Outcomes:**

A successful completion of this course will enable students to

- Explain how fashion marketing and merchandising can help the fashion industry.
- Define role and responsibilities of fashion marketers and fashion merchandisers.
- Identify target markets and build consumer profiles for fashion products
- Select promotional tool suitable for potential customers.
- Develop a promotional plan and promote a merchandise
- Make market visits and negotiate with vendors
- Develop and prepare merchandise plan as well as a merchandise assortment
- Establish and use inventory control systems

**Course content****Unit-I. Understanding the Basic Concepts of Fashion Marketing**

**AndMerchandising**

- 1.1 Fashion business terminologies
- 1.2 Nature and scope of fashion marketing and merchandising
- 1.3 The marketing environment: macro and micro
- 1.4 Areas of fashion marketing and merchandising: public relations, brand management, event planning, customer relations, social media, advertising, retail buying, store management, fashion buying, visual merchandising, retail sales management
- 1.5 Profiles of occupations in fashion marketing and merchandising

**Unit-II. Researching the Fashion Market and Consumer**

- 2.1 The fashion consumer and organizational buyer
- 2.2 Segmentation and the marketing mix
- 2.3 Fashion marketing research: identifying the needs and wants of target customer.

**Unit-III. Fashion Marketing Communication**

- 3.1 Promotion tools for fashion marketing: advertising, sales promotion, packaging, public relations and publicity
- 3.2 Onsite Promotion: visual merchandising framework and approaches

**Unit-IV. Merchandise Management**

- 4.1 Types of Merchandise
- 4.2 Six rights of merchandising and their importance
- 4.3 Merchandise planning, acquisition, handling and monitoring
- 4.4 Supply chain management
- 4.5 Inventory Control systems
- 4.6 Financial accounting

**Unit-V. Future Trends in Buying and Merchandising**

- 5.1 The changing impact of IT on fashion retailing
- 5.2 The impact of new manufacturing techniques



- 5.3 The fashion buyers of the future
- 5.4 The fashion merchandiser of the future
- 5.5 Future technologies impacts on the consumer
- 5.6 Other types of fashion retail competition

### **Practical**

1. Identify the marketplace and evaluate customers, as well as trends affecting future sales
2. Case studies to understand the buying procedures of various types of fashion retail businesses and also analyze the environment in which buying occurs.
3. Review trends, emerging and the growing retail formats where will consumers make purchases through literature and field visits
4. Describe your customers; identifying changes in consumer markets, understanding buying motives and learning about customers through data warehousing and data mining
5. Plotting customer profiles for various fashion businesses
6. Analyze promotional activities used by fashion businesses
7. Promoting a merchandise for fashion business – experiential project
8. Visual merchandising projects to be undertaken for different fashion businesses
9. Interact with Store managers to understand how they develop and prepare merchandise plan as well as a merchandise assortment for their business. What are their best practices?
10. Visit to various type of markets
11. Case study of fashion business to understand its supply chain management and inventory control systems

### **Learning Experiences**

- Regular lectures, exercises on observation and follow up discussion, role play, case studies, films and documentaries, Digital files, weblinks, field visits, interviews, market visits and survey, hand on experiences.

**Evaluation**

- Quiz, field work, presentation, assignment, class tests, log book records.

**Reference**

- Bliss, L. L. (1995) Study Guide Visual Merchandising and Display 3<sup>rd</sup> ed. Fairchild Publications.
- Blythe, J. (2006), Principles and Practice of Marketing, Thomson, London.
- Easey M. ( 2009), Fashion Marketing, 3<sup>rd</sup> ed. United Kingdom: Blackwell Publishing
- Elaine, S. (2013) The Dynamics of Fashion. 4<sup>th</sup> ed. New York: Bloomsbury publication
- Kotler, P. and Gary, A. (2001) Principles of Marketing. 9th ed. Upper Saddle River, N.J.: Prentice Hall
- Wolfe, M. (2009) Fashion Marketing & Merchandising, 3<sup>rd</sup> ed. United States: Goodheart-Willcox Publishing

<https://www.slideshare.net/kotharivr/fashion-merchandising-ebook>

**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Apparel Construction**  
**(Credits: Theory 4 & Practical 2)**

**Course Description**

The course introduces the basic principles of apparel construction including pattern and fabric selection. The course aims at developing skills in using knowledge of apparel construction required to be employed in the field of apparel industry and entrepreneurship. It deals with the tools and techniques required for apparel construction. It covers the pattern making and grading techniques required for making apparels. It gives hands on experience for apparel construction which is the pre requisite of apparel industry.

**Learning Objectives:**

- Learns the requirement for apparel construction
- Understand the use, significance and selection of tools and equipment for apparel construction
- Understand the coordination of fabric, pattern and supportive material.
- Enhance the understanding of drafting and pattern making.
- Acquire skills of apparel construction
- Understand fit of the garment.

**Learning Outcomes:**

A successful completion of this course will enable students to

- Know the requirements for apparel construction
- Describe the use and significance of tools and equipment for apparel construction
- Explain drafting and pattern making method.
- Explore the skills of apparel construction
- Adapt basic block to different designs.
- Evaluate fit of the garment

**Course Content****Unit-I. Introduction to Apparel Construction**

- 1.1 Elements of apparel construction

Grain, Seams, Finish, Workmanship

#### 1.2 Guides to sew fabrics

Threads, needles, seams and its co-relation to fabrics

#### 1.3 Uses of essentials tools and supplies

Sewing Needles, hand sewing tools, marking tools, measuring tools, cutting tools, pressing tools, threads, special tools, trims & tapes, buttons & closures.

### **Unit-II. Basics of Apparel Construction**

#### 2.1 Body measurements (BM):

Principles of taking BM,

Taking accurate body measurements

Measuring from a garment.

#### 2.2 Size charts

Standard size charts for Kids, Men and Women

Ease allowance for various fit.

Comparison of standard size charts from different countries and brands

#### 2.3 Fabric Requirement:

Calculation fabric needed for various garments.

Optimising the fabric requirement

#### 2.4 Principles and methods of grading and sizing

### **Unit-III. Pattern Making**

#### 3.1 Introduction to pattern making

#### 3.2 Pattern making tools

#### 3.3 Pattern making techniques: Drafting, Draping and Flat pattern technique

#### 3.4 Darts and their manipulation, added fullness and contouring.

#### 3.5 Principles of pattern making for: Upper garment, Lower garment, Sleeves, Collar, Dresses

### **Unit-IV. Fabric Layout, Cutting And Marking**

#### 4.1 Fabric preparation

- 4.2 Laying out checks, plaids & directional fabrics,
- 4.3 Marking with chalk, pencil or liquid markers
- 4.4 Cutting and sewing tips

### **Unit-V. Selection of Fabric and Accessories**

- 5.1 Fabrics: Easy to stitch, special fabrics, textured and patterned fabrics
- 5.2 Selection of appropriate fabrics for apparels.
- 5.3 Accessories and trimmings : types and use
- 5.4 Appropriate combination of accessories, trims and materials

### **Practical**

1. Development of basic block
  - a. Upper and
  - b. Lower
2. Drafting and construction of different types of
  - a. Collars
  - b. Plackets and
  - c. Sleeves
3. Drafting and construction of
  - a. Salwar
  - b. Churidar
4. Adaptation of basic block for designing of
  - a. Frock
  - b. Kurta
  - c. Blouse
  - d. Shirt
5. Construction of above designed patterns.
  - a. Maintaining of journal with the details of the practical work in writing and supported with samples.

**Learning Experience**

- Regular Lectures along with power point presentation/ videos on construction process/demonstration of the skills/hands on experience for drafting, pattern making, sizing and construction / visit to Apparel Industry

**Evaluation**

- Class test/Assignment/practical evaluation/portfolio presentation

**Reference:**

- Aldrich, W. (1988). Metric Pattern Cutting. Unwin Hyman Ltd., London.
- Amaden,C.& Crawford (1995) Fashion Your Own Skirts the Simple way Amaden-Crawford Associates, USA.
- Armstrong, H. (2012). Patternmaking for Fashion Design Pearson Education, Inc, New Delhi.
- Bray N., (1986) Dress Pattern Designing: The Basic Principles of cut and fit, Blackwell Publishing.
- Hollen, N.R. &Kundel, C.J. (1993). Pattern Making by the Flat-Pattern Method. Prentice Hall, New Jersey.
- Kopp, E., Rolfo, V. &Zelin, B. (1995). Designing Apparel through the Flat Pattern. Fairchild Publications New York.
- Singer. (1989). Sewing Pants that Fit. Cowles Creative Publishing Inc. Minnesota, USA
- Thomas, A. J. (1993). Art of Sewing. UBS Publishers Distributions Ltd. New Delhi
- Zarpakar, K.R. (2008). Zarpakar System of Cutting. Navneet Publication (India) Ltd., Mumbai.

**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Textile Design and Illustration**  
**(Credits: Theory 4 & Practical 2)**

**Course Description**

Design and development of textiles is the key to the fashion world. This course aims to develop innovative approaches to design by understanding the fundamentals of design. It emphasizes on building a variety of skills, in combination with theoretical knowledge and practical application. It also focuses on knowledge and techniques needed to produce fashion drawings along with the vocabulary of clothing styles and accessories. It will lead to the development of students' intellectual abilities, creativity, independence, critical self-awareness, imagination and skills that will enhance global employment opportunities on completion of the course

**Learning Objectives:**

- Understand the principles and elements of design.
- Apply the principles and elements of design in textiles and fashion design.
- Explore and learn sketching and drawing techniques to represent styles and fabrics in fashion.
- Learns basic traditional media methods to develop creative and customized fashion illustrations
- Design apparels and accessories for men, women and children.

**Learning Outcomes:**

A successful completion of this course will enable students to

- Define the principles and elements of design.
- Applies the principles and elements of design in textiles and fashion design.
- Design and create visual compositions in fashion illustration.
- Analyze fabrics and their tactile/visual qualities to render them appropriately.
- Explains fashion apparel construction when illustrating garments.
- Apply basic traditional media methods to develop creative and customized fashion illustrations

## **Course Content**

### **Unit-I. Understanding Design**

- 1.1 Design-its meaning and importance
- 1.2 Importance of good taste in design
- 1.3 Designer – Textile designer and Fashion designer
- 1.4 Challenges and opportunities for design and designers

### **Unit-II.Elements of Design and Its Co-Relation**

- 2.1 Point
- 2.2 Line
- 2.3 Color
- 2.4 Plane
- 2.5 Volume
- 2.6 Space
- 2.7 Shape
- 2.8 Form light
- 2.9 Texture pattern

### **Unit-III. Principles of Design and Its Co-Relation**

- 3.1 Balance
- 3.2 Proportion and scale
- 3.3 Rhythm
- 3.4 Emphasis
- 3.5 Harmony
- 3.6 Contrast
- 3.7 Variety
- 3.8 Law of area

### **Unit-IV. Line, Colour and Pattern in Design**

- 4.1 Line and its expressiveness



Types and composition

Effect of lines to create rhythm and optical illusions

#### 4.2 Colour expression

Colour wheel and its dimension

Colour mixing and colour system

Colour harmony and colour scheme

Colour in different media

Colour in fabric, texture and light

#### 4.3 Pattern

Surface pattern and pattern group

Repeat pattern

### **Unit-V. Human body proportions and illustrating fashion**

5.1 Balance and proportion in human body: average and fashion figures

5.2 Postures of male, female and children croquies and its significance: Front view, Back view, Side view and 3/4th view

5.3 Stylizing the croquie and its importance

5.4 Understanding fabric textures and drapes

### **Practical**

1. Introduction of flat sketches, garment features and accessories: types of silhouettes, skirts, trousers, necklines, collars, sleeves, coats and jackets, footwear, handbags.
2. Factors to be considered when designing for children, women and men- formal wear, casual wear, night wear, sportswear, ethnic wear, wedding wear
3. Drawing average and fashion figures: stick, block and flesh
4. Observation of people and live sketching in different postures
5. Converting photographic poses from magazines into fashion illustration
6. Exploring medias to create fabric textures
7. Rendering of fabric swatches and fabric drapes using different colour medias

8. Visit to fashion museum / virtual tour of a fashion museum.
9. Visiting designers' boutique / designer's website
10. Preparation of an album of garment features for designing of Apparels.
11. Preparation of an album of accessories suitable for different occasion.
12. Observation of people in different situations and live sketching of styles worn
13. Designing of apparel and accessories for men as per the given brief.
14. Designing of apparel and accessories for women as per the given brief.
15. Designing of apparel and accessories for children as per the given brief.
16. Portfolio development

## **Learning Experiences**

- Regular lectures, exercises on observation and follow up discussion, case studies, films and documentaries, web links, Digital files.

## **Evaluation**

- Class exercises, visit reports, class test, presentations and assignments

## **Reference**

- Derrick, L. (2018) Fashion Sketchbook: Fashion Sketchbook with figure templates (Fashion Croquis), Create Space Independent Publishing Platform
- Elaine, S. (2013) The Dynamics of Fashion. 4<sup>th</sup> Ed. New York: Bloomsbury publication.
- Julia Y. & Donna G., (2011), the Fashion Careers Guidebook: A Guide to Every Career in the Fashion Industry and How to Get It, Barron's Educational Series.
- Linda, T., (2010), Portfolio Presentation for Fashion Designers, 3rd Edition, Fairchild books, New York.
- Mary, L.G., (2008), The Fairchild Encyclopedia of Menswear, Fairchild Publications, New York.

- Michele W.B., Diane D., (2006), the Spec Manual, Fairchild Publications, New York.
- Patrick, J. I. (2009) New Encyclopedia of Fashion Details: Over 1000 Fashion Details, London: B.T. Batsford.
- Patrick, J. I. (1996) Fashion Design Illustration - men, London: B.T. Batsford.
- Patrick, J. I. (2005) Fashion Design Illustration - men, London: B.T. Batsford
  
- Patrick, J. I. (2003) Introduction to Fashion Design, London: B.T. Batsford
- Sharon L. T. and Glazer, S.S. (2017), Illustrating Fashion, 4<sup>th</sup> Ed. New York: Fairchild Books. The Snap Fashion Sketch Book, Prentice Hall, New Jersey.
- Stipelman, S. (2017) Illustrating Fashion, 4<sup>th</sup> Ed. New York: Fairchild Books.
- Tate, S. L. & Glazer, B. (2007) The Snap Fashion Sketchbook, New Jersey: Prentice Hall.

**DISCIPLINE SPECIFIC ELECTIVE COURSE  
DYEING, PRINTING AND FINISHING OF TEXTILES  
(Credits: Theory 4 & Practical 2)**

**Course Description**

After the manufacturing of textiles, value addition is required. Dyeing printing and finishing of the textiles are the prime methods of value addition to the textiles. This course deals with the basics of the Dyeing, printing and finishing along with the influence of chemicals and auxiliaries on the end products. It further describes different types of dyeing, printing and finishing and explains the procedure of doing it on different fabrics to obtain required results This will help in using reasonably priced dyes and dyeing procedure and operating according to ecological requirements and carrying out in the shortest possible time.

**Learning Objectives:**

- Introduce basics of dyeing, printing and finishing
- Inculcate the knowledge of auxiliaries and chemicals used for dyeing and printing
- Enhance the understanding of the relation between the dyes, pigments and fabrics.
- Acquaint students with the importance of finishing of textiles
- Develop the skills in doing dyeing and printing of textiles
- Reproducing the required shade from batch to batch.

**Learning Outcomes:**

A successful completion of this course will enable students to

- Describe the basics of dyeing, printing and finishing.
- Examine the knowledge of auxiliaries and chemicals used for dyeing and printing
- Explain the relation between the dyes, pigments and fabrics.
- Recommend the finishing for textiles
- Dye and print textiles.
- Reproduce the required shade from batch to batch.

## **Course content**

### **Unit-I. Introduction**

- History of dyeing and printing
- Terms related to colour
  - Dye, pigment, light, hue, value, intensity
- Colour wheel and schemes
- Digital colour models: CMYK. RGB
- Colour matching system
- Directional and non-directional printing
- Motifs types: Geometric, floral and novelty

### **Unit-II. Basics of Dyeing and Printing**

- 2.1 Classification of dyes
- 2.2 Classification of Printing
- 2.3 Difference between dyes and pigments
- 2.4 Pre-preparation of fabrics before dyeing and printing
  - Desizing, scouring, bleaching, mercerization, carbonization
- 2.5 Heat setting: processing method

### **Unit-III. Dyeing**

- 3.1 Classification of dyes
- 3.2 Auxiliaries and machineries used for dyeing
- 3.3 Methods for dyeing
- 3.4 Factors affecting dyeing
- 3.5 Dyeing of cotton, wool and silk
- 3.6 Dyeing of viscose and polyester
- 3.7 Natural dyeing methods and limitations
- 3.8 After treatments

**Unit-IV. Printing**

- 4.1 Preparation of print paste and printing table
- 4.2 Pigments and dyes used
- 4.3 Direct style of printing
- 4.4 Resist style of printing
- 4.5 Discharge style of printing
- 4.6 Novel techniques of printing
- 4.7 Fixation and after treatment processes
- 4.8 Dyes for digital textile printing

**Unit-V.Finishes**

- 5.1 Classification : Physical, Chemical and Functional
- 5.2 Objectives of textile finishing
- 5.3 Factors affecting the finishing of textiles: fibre, weave, physical properties, end use, susceptibility to chemical modification
- 5.4 Finishes for achieving different texture
- 5.5 Finishes for enhancing specific characteristics

**Practical**

1. Preparation of fabric for dyeing and printing
  - a. Scouring, desizing, bleaching
2. Dyeing: Dyeing of yarn and fabric with different classes of dyes by varying the temperatures, %shade and M: L ratio.
  - a. Dyeing of cotton yarn and fabric with direct dyes, vat and reactive dyes.
  - b. Dyeing of silk, wool and nylon yarn and fabrics with basic and acid dyes.
  - c. Dyeing of polyester yarn and fabric with disperse dyes.
3. Making designs for
  - a. Blocks, stencil and screen
4. Preparation of
  - a. Blocks, stencil and screen
5. Printing of fabrics using:
  - i. Direct style - block, stencil and screen

- ii. Resist style - Tie &Dye, Batik
6. Application of starch by varying concentration and material
  - a. Natural starch
  - b. Synthetic starch
7. Printing on garments by different styles
8. Product development

### **Learning Experience**

- Lectures along with power point presentation/ videos on industrial methods/hands on experience for dyeing and printing on textiles/visit to Dyeing and Printing unit

### **Evaluation**

- Class test/Assignment/practical evaluation/product evaluation

### **Reference**

- Chavan, R.B. (1979). Textile Printing (Book of Papers) Department of Textile Technology, IIT New Delhi.
- Giles, G.H. (1974) Laboratory Course in Dyeing Hart & Clough; Bradford; England Kale D.G. (1976) Principles of Cotton Printing. Maharaja Brothers Ahmedabad.
- Saraiya, N.S. & Gupta P.C. Technology and Management of Printing.
- Shenai, V.A. (1979). Chemistry of Dyes and Principles of Dyeing. Sevak Publications Mumbai
- Trotman E.R. (1975). Dyeing and Chemical Technology of Textile Fibre. Charles Griffin & Co. Ltd., London
- Wynne Andrea (1997). Textiles. The Motivate Series Mcmillain Education Ltd., London.
- Vilensky L.D. & Gohil E.P. G. (1987) Textile Science, An explanation of fiber properties. CBS Publishers & Distribution, Delhi.

**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Childhood and Adolescence**  
**(Credits: Theory - 4, Practical - 2)**

**Course Description**

The course introduces students to child and adolescent development. It explains basic developmental principles and psychosocial factors which influence development from conception till 18 years. It further explores the influence of a range of issues from birth through age 18.

**Learning Objectives**

1. Develop an understanding about the need and importance of studying child and adolescent development.
2. Develop an understanding about the historical views and theories on childhood and adolescent development.
3. Learn about the characteristics, needs and developmental tasks of infancy, early middle and late childhood, and early, middle and late adolescence.
4. Learn about the biological and environmental factors that affect development during childhood and adolescence.
5. Learn key issues which influence childhood and adolescent development.

**Learning Outcomes**

1. Explain the need and importance of studying childhood and adolescence as a distinctive stage of the life-span.
2. Describe the historical views and theories on childhood and adolescent development.
3. Describe the characteristics, needs and developmental tasks of infancy, early childhood, middle childhood and early and late adolescence.
4. Identify the biological and environmental factors affecting development during childhood and adolescence.
5. Analyze key issues that influence child and adolescent development.



## **UNIT-I Childhood and Adolescent Development: Introduction**

- 1.1 Concept, meaning and principles of ‘growth’ and ‘development’.
- 1.2 Concept of critical periods of development during infancy, childhood and adolescence.
- 1.3 Importance of early stimulation and intervention during early years - evidence from neuroscience research.

## **UNIT-II Historical Foundations and Theories of Childhood and Adolescent Development**

- 2.1 Historical foundations and scientific beginnings
- 2.2 Brief overview of theories of child and adolescent development – maturational, behavioral, psychosocial, cognitive, social learning, ecological, sociocultural, ethological
- 2.3 Brief overview of theories of child and adolescent development including the maturational, psychodynamic, behavioral, psychosocial, cognitive, social learning, ecological, existential/phenomenological, sociocultural, ethological, sociobiological, and interactionist perspectives.

## **UNIT-III Development across Childhood and Adolescence**

- 3.1 Major characteristics of different stages of childhood and adolescence (infancy, early, middle and late childhood, puberty, early and late adolescence)
- 3.2 What are developmental tasks and milestones, and their importance.

With reference to each domain of development (physical, cognitive, language, socio-emotional) characteristics, needs, developmental tasks and milestones of individuals from birth to 18 years are explained.

- Neonate (birth–1 month)
- Infancy (1 month–2 years)
- Early childhood (2-6 years)
- Middle childhood (6-11 years)

- Adolescence (12-18 years)

## **UNIT-IV Familial and Social Influences on Childhood and**

### **Adolescent Development**

- 4.1 Family influences on child and adolescent development
- 4.2 Influence of various parenting styles on development, behavior and functioning during childhood and adolescence
- 4.3 Changes in self-esteem, self- concept and identity from early childhood through adolescence
- 4.4 Moral development from early childhood to late adolescence in relation to societal norms and social understanding
- 4.5 Development of gender roles and perceptions, changes in gender identity from early childhood through adolescence

## **UNIT-V Childhood and Adolescent Development: Key Issues**

- 5.1 Influence of peer relationships on development
- 5.2 Impact of media and its influences on development and learning
- 5.3 Physical, psychological and social effects of substance abuse and risk behaviors
- 5.4 Role of nutrition in childhood and adolescent development.
- 5.5 Brief overview of aggression, gender roles and stereotypes, androgyny, friendship, popularity and rejection, sibling relations, juvenile delinquency, suicide, depression, elopement, puberty, early/late maturation, human sexuality, eating disorders during childhood and adolescence

### **Practical(s)**

1. Preparation of an album on developmental milestones of children and adolescents.
2. Visit to a pediatric ward
3. Visit to an *Anganwadi*
4. Interaction with counselors/clinical psychologists
5. Carry out a case study of an adolescent boy and girl using multiple methods

6. Select a topic related to a significant developmental problem or issue faced by children and adolescents and describe ways to assist them, their teachers and parents to deal with the problem.

### **Learning Experiences**

- Regular lectures, exercises on observation and follow up discussion, case studies, films and documentaries

### **Evaluation**

- Class test, presentation and one essay/take home based on observations

### **References**

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Adulthood and Aging**  
**(Credits: Theory - 4, Practical- 2)**

**Course Description**

The course introduces students to the concept of adult development and aging. It explains basic developmental transitions in adulthood and late adulthood or old age. Various facets of adult development across domains and developmental needs of the elderly are discussed. Cultural and gender differences in the experiences of aging are included.

**Learning Objectives**

1. Understand the theoretical significance of adulthood in life span development with special reference to aging
2. Develop a culturally relevant understanding of issues and concerns of adulthood and aging
3. Sensitize students to transitions in adult life and preparation for old age from a gender perspective
4. Create awareness about policy provisions for adults and elderly across various contexts (work, family, retirement, health, welfare).
5. Prepare students for outreach activities with varied groups of adults and elderly.

**Learning Outcomes**

1. Explain variations in the experiences of adulthood and old age across cultures and genders
2. Discuss factors that affect physical, cognitive and socio-emotional development during adulthood and old age
3. Identify developmental needs of varied groups of adults and elderly across contexts
4. Evaluate policy recommendations for adults and elderly across contexts
5. Execute developmental programs of intervention for varied groups of adults and elders

## **UNIT-I Stages of Adult Development and the Process of Aging: A**

### **Theoretical Overview**

- 1.1 Historical perspectives on adulthood and aging
- 1.2 Contemporary changes, increase in life expectancy and decrease in death rate
- 1.3 Stages of Adulthood and Aging: Emerging adulthood (18-25), mature adulthood (25-45), middle age (45-55), late adulthood (55-65), old age (65 and above)
- 1.4 Characteristics and needs in different stages of adulthood
- 1.5 Theories of adult development and aging (Erikson's theory, Wisdom theories, Disengagement, Activity, Continuity theory, Ashrama Dharma framework)

## **UNIT-II Development in Emerging and Early Adulthood**

- 2.1 Definition, characteristics, developmental tasks
- 2.2 Physical changes - Cardiovascular and Respiratory systems, Motor performance, Immune system
- 2.3 Cognitive development - Changes in mental abilities - Crystallized and fluid intelligence, Information processing - Speed, Attention, Memory, Problem solving and Creativity
- 2.4 Life transitions and adjustments during early adulthood: Exploring sexual orientations, stable romantic relationships, alternative life choices, marriage, family life, parenting and caregiving, social mobility
- 2.5 Cultural, gender and social class variations in the experience of adulthood and aging
- 2.6 Interpersonal relationships and responsibility challenges in different spheres of life (balancing work and family, socio-cultural responsibilities, health challenges, emotional stresses, financial security)

## **UNIT-III Development in Middle and Late Adulthood**

- 3.1 Definition, characteristics, developmental tasks,
- 3.2 Physical and cognitive changes, Changes in interests, Social, emotional, vocational changes,
- 3.3 Relationships at midlife - marriage and divorce, changing parent-child relationships, grandparenthood, siblings, friendships, relationship across generations- Middle aged children and their aging parents

- 3.4 Preparation for old age (From work to retirement, emotional, financial, social and familial transitions, )
- 3.5 Contextual variations in the experience of late adulthood and aging (rural-urban, socio-economic, employed-unemployed, organized-unorganized sector etc.)

## **UNIT-IV Development in Old Age**

- 4.1 The phenomenon of aging - biological, psychological, sociological and functional age; optimal aging, normal aging, primary and secondary aging and successful aging
- 4.2 Gerontology - Definition, concept, history, importance and scope
- 4.3 Types - Social gerontology, Bio gerontology, Medical gerontology (Geriatric)
- 4.4 Theories of aging process – Sociological, Psychological and Biological theories of aging.
- 4.5 Psychosocial development in old age, Erikson's theory – ego integrity Vs. despair, Labouvie - Vief's theory, Peck's theory, Wisdom theories – Indian and Western
- 4.6 Changing relationships in old age – marriage and divorce, widowhood, never-married, childless older adults, siblings, friendships
- 4.7 Myths and realities of aging Adjustments - Physical and mental changes, Vocational adjustments- adjustment to retirement, different living arrangements, familial roles and relationships.
- 4.8 Dealing with stressful life events, divorce, terminal illness, death and bereavement
- 4.9 Overview of Alzheimer, Dementia, Parkinson's disease Common abuses among elderly- physical, emotional, psychological, verbal and financial, reporting abuse, Adult Protective Services.
- 4.10 Policy provisions for the elderly: Global and national

## **UNIT-V Aging and Well-Being in the 21<sup>st</sup> Century**

- 5.1 Demographic profile of elderly in the world and India
- 5.2 Living arrangements (intergenerational families, old age homes, institutions etc.) and new models of care giving
- 5.3 Overcoming mental health challenges (loneliness, depression, anxiety, dementia, other age-related diseases etc.)

5.4 Life style changes and holistic health (physical well-being, food choices, yoga and restorative fitness, counseling and therapy, social and interpersonal support systems)

5.5 Technology and aging (use of internet, advances in health and medical treatment, gadgets supporting safety and security of elderly)

5.6 Leisure time activities and innovative models of developmental intervention

### **Practical(s)**

1. Preparation of an album on developmental transitions, individual and family life transitions during adult life.
2. Visit to old age home or specialized living arrangements for elderly.
3. Visit to leisure facilities for elderly like laughing clubs, recreational clubs
4. Visiting your parents' workplace to understand their roles and responsibilities.
5. Documenting your mother's and grandmother's life aspirations and experiences before and after marriage.
6. Preparing a list of specialized services for the elderly in the city and / or preparing an elderly support kit (support with amenities, important phone numbers, medicines, reminders etc.)
7. Planning a hands-on workshop session for teaching internet and smart phone use to elderly
8. Interviewing elderly couples about their relationship, life challenges and satisfactions
9. Planning a panel discussion or awareness session on welfare policies and policy recommendations for older persons in India
10. Discussing intergenerational relationships of emerging/young adults and parents as portrayed in cinema, advertisements and social media

### **Learning Experiences**

- Regular lectures, group discussions, participant observation and follow up discussion, case studies, films and documentaries

### **Evaluation**

- Class test, presentations and one essay/take home based on observations, concept papers

### **References**

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Interpersonal Relationships and Family Dynamics**  
**(Credits: Theory- 4, Practical- 2)**

**Course Description**

The course prepares students for an understanding of contemporary interpersonal relationships in families and in society, from a psycho-social perspective. It includes a focus on concepts and theories of interpersonal communication, with an emphasis on types of relationships (family/peers/workplace), relationship development, communication strategies, stress and conflict management.

**Learning Objectives**

1. Understand interpersonal relationships and family dynamics in contemporary India.
2. Understand one's own self and others with the aim of improving interpersonal relationships.
3. Understand theories and perspectives related to interpersonal relationships and family dynamics.
4. Develop an insight into interpersonal stress, conflict and its resolution.

**Learning Outcomes**

1. Explain basic components and processes involved in interpersonal relationship
2. Describe theoretical perspectives in understanding interpersonal relationships and family dynamics.
3. Use one's self-awareness in understanding significant others. Illustrate the significance of self-awareness in our understanding of significant others.
4. Formulate strategies for developing positive dynamics in different relationships and managing conflict.

**UNIT-I Understanding the Self**

- 1.1 Self-Awareness—personality characteristics, cultural beliefs, values, expectations and ideas guiding behavior
- 1.2 Self-identity— Identifying one's own philosophy and goals of life (influenced by personal history, socialization and context)
- 1.3 Personality—factors that shape one's personality and its influence on behavior and

interpersonal communications

1.4 Self with family/parents/siblings, peers, social/professional organizations

1.5 The impact of media on the self

## **UNIT-II Perspectives and Theories**

2.1 Perspectives: On friendships, love, family and other interpersonal relationships

- Ethological Perspective
- Neurobiological Perspective
- Psychological Perspective
- Sociological Perspective
- Cross-cultural perspectives

2.2 Theories:

- Social Exchange Theory
- Family Systems Theory
- Family Developmental Theory
- Ecological Systems Theory
- Attachment Theory
- Triangular theory of love - Robert Sternberg

## **UNIT-III Basics of Interpersonal Communication**

3.1 Process and components of basic communication

3.2 Interpersonal communication: communication of ideas and feelings, self-disclosure, crediting and criticism

3.3 Nurturing positive interpersonal communication and dynamics: perspective taking, empathy, listening and feedback skills.

3.4 Resolving interpersonal conflicts: Types of conflicts and management skills (in relation with marital, parental, workplace, family, and friends)

## **UNIT-IV Life Choices (Education, Career, Romantic Relationships)**

4.1 Engagement with life goals and conscious life choices- in view of personal philosophy, demands of the family, peers, societal norms.

- 4.2 Understanding intimate, love and romantic relationships within a cultural context
- 4.3 Career choices and professional relationships- developing trust, mutual respect, mindfulness, appreciation for diversity and open communication.
- 4.4 Understanding the role of adjustments in relationships- myths, misconceptions and factors influencing adjustment patterns.

## **UNIT-V Family Dynamics**

- 5.1 Understanding Family Dynamics- Definition, function and scope
- 5.2 Factors that shape roles, relationships and family dynamics (family size, age composition, structure, social and financial status, gender and ordinal position, power, hierarchy and patriarchy, employment) and how these dynamics shape individual personality and behavior.
- 5.3 Change and evolution of the family - Family life cycle and stages
- 5.4 Changing roles and dynamics through significant life events: romantic relationships, partner selection, marriage, childbirth, parenting, career trajectories and economic status, health issues, loss of loved ones.
- 5.5 Gender norms and roles in family dynamics
- 5.6 Interpersonal communication within families: Managing expectations (family/self/society), self-goals, adjustments and negotiations.
- 5.7 Forms of family crisis: Marriage, divorce/separation, remarriage, financial instability, poor work-family balance, illness, death, childlessness, child abuse/neglect, family violence, peer pressure, addiction, rape, suicide, unemployment, natural disasters, epidemics and wars.
- 5.8 Family cohesion- the role of effective communication, compassion, perspective-taking, role distribution, positive conflict resolution, and teamwork.
- 5.9 Agencies offering support: Marriage and family therapists, Family courts, Child guidance clinics, counseling and rehabilitation centers.

### **Practical(s)**

1. Group discussion/role play/simulations on interpersonal relationships
2. Conduct workshops on: cultural variations in interpersonal relationships, family dynamics, verbal vs non-verbal communication, and social networking.

3. Plan an interaction with a counselor or therapists working in the area of interpersonal conflicts (in the family family/peer group/parent-child dyad/workplace).
4. Conduct a workshop on enhancing family cohesion and conflict resolution
5. Select a form of family crisis or stress. Describe ways of preventing and managing the crisis.
6. Create posters about ways to improve interpersonal communication skills and patters of relating to enhance resiliency in relationships.

### **Learning Experiences**

- Regular lectures, exercises, use of library for simple research projects, observations and follow up discussion, case studies, films, documentaries and debates.

### **Evaluations**

- Class test, presentation and one essay/take home based on observations

### **References**

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**DISCIPLINE SPECIFIC ELECTIVE**  
**Gender, Society and Human Development**  
**(Credits: Theory - 4, Practical- 2)**

**Course Description**

The course introduces students to gender and related concepts, and enables an understanding of gender as a socially constructed concept. It explores critical questions about the meaning and implications of gender in society, and acquaints students with key issues, debates, and questions pertaining to gender.

**Learning Objectives**

- Critically understand the situation of women and men in Indian society from multiple perspectives.
- Learn about the concepts of gender, patriarchy, equality, equity, and feminism as well as the intersection of social class and caste to determine the status of women.
- Recognize how social institutions are patriarchal.
- Develop sensitivity regarding the socio-cultural, economic and political factors that shape life experiences in relation to gender
- Learn about women's human rights and laws related to women in India.
- Learn about different gender identities and sexual orientations- masculinities, LGBTQIA in the Indian context

**Learning Outcomes**

- Describe basic concepts of gender and relevance of gender studies as an academic discipline.
- Describe theories and concepts of gender and development.
- Analyze human rights in terms of gender equality and gender equity.
- Critically analyze existing laws and the legal system through a gender lens.

- Analyze how gender is constructed in different types of media.

### **UNIT-I Gender: A Social Construction**

- 1.1 Differences between sex and gender – biological determinism
- 1.2 Key gender concepts and definitions
- 1.3 Gender socialization in family and society
- 1.4 Patriarchal institutions and key areas of patriarchal control
- 1.5 Caste, class and gender intersectionality in India
- 1.6 Gender identities and sexual orientations (femininity, masculinity, LGBTQIA)
- 1.7 Status of women – historical and contemporary perspectives
- 1.8 Introduction to women’s studies/ gender studies as a discipline

### **UNIT-II Gender and Development: Approaches and Strategies**

- 2.1 Concept of gender and development – indicators of human and gender development – equality and equity
- 2.2 Orientation to theories of women, gender and development (WID, WAD and GAD)
- 2.3 Human Development Index (HDI), Gender Development Index (GDI), Gender Inequality Index (GII), and Gender Empowerment Measure
- 2.4 Gender budgeting and gender auditing
- 2.5 Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs)

### **UNIT-III Gender, Rights and Laws**

- 3.1 Girls, women, and human rights
- 3.2 UDHR, UN-CEDAW and UN-CRC
- 3.3 Constitutional provisions accorded to women
- 3.4 Legal aspects related to women: PCPNDT Act, PWDVA, Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) act, Indecent Representation of Women (Prohibition) Act, The Dowry Prohibition Act.
- 3.5 Overview of laws related to marriage, divorce and property inheritance.
- 3.6 The Women’s Reservation Bill

### **UNIT-IV Role of Media in Social Construction of Gender**



- 4.1 Social construction of gender reality by contemporary media
- 4.2 Media and perpetuation of gender stereotypes: rhetoric of the image, narrative
- 4.3 Mainstream media and gender
- 4.4 Representation of women in media in political, cultural and social landscape
- 4.5 Researching and analyzing media from a gender perspective: in broadcast, print, new media.
- 4.6 Gender and media ethics
- 4.7 Gender and ICTs

## **UNIT-V Gender, Health and Empowerment**

- 5.1 Gender discrimination and under nutrition
- 5.2 Epidemiology of menstruation and menstrual disorder, health indicators and gender gap
- 5.3 Socioeconomic inequality and women's health
- 5.4 Biological and psychological determinants of women's health (all in brief)
- 5.5 Gender inequality in labor market: segmented labor market and occupational segregation
- 5.6 Gendered jobs and social inequality
- 5.7 Sex segregation at work place (in brief)

### **Practical (s)**

1. Analysis of gender differentials using development indicators
2. Gender based analysis of media with special reference to portrayal of women
3. Case studies for programs and campaign for women's development.
4. Analyze the achievements of MDGs
5. Analyze the progress of SDGs
6. Critically engage with Laws and Acts for Women in India
7. Observe the representation of masculinity in Indian movies
8. Submit report after visiting local Women's organization and LGBTQAI organizations

### **Learning Experiences**

- Regular Class Lectures, Reading and Discussion, Presentation, Films/Documentaries/Videos, Self-Study

### **Evaluation**

- Assignment, Term Paper, Presentation, Regular Class Room Discussions

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  - <http://ncw.nic.in/important-links/List-of-Laws-Related-to-Women>
  - [https://www.india.gov.in/sites/upload\\_files/npi/files/coi\\_part\\_full.pdf](https://www.india.gov.in/sites/upload_files/npi/files/coi_part_full.pdf)
17. Websites of United Nations and UNDP, OHCHR to get the details of UDHR, UN CEDAW, UNCRC, MDGs and SDGs.

- <https://www.un.org/en/universal-declaration-human-rights/>
- <https://www.un.org/womenwatch/daw/cedaw/text/econvention.htm>
- <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>
- <https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>
- [https://www.undp.org/content/undp/en/home/sdgoverview/mdg\\_goals.html](https://www.undp.org/content/undp/en/home/sdgoverview/mdg_goals.html)

**DISCIPLINE SPECIFIC ELECTIVE**  
**Nutrition for Health and Physical Fitness**  
**(Credits: Theory; 4 & Practical: 2)**

**Course Description**

Integration and application of principles of sound nutrition and physical activities to optimize the physiological, psychological, and social lifelong development of the individual and use of scientific principles and current technological advances, helps to assess and evaluate physical fitness, body composition, dietary patterns, energy expenditure, and their interrelationships.

**Learning Objectives:**

- Understand the Importance of Nutrition, Fitness and Health
- Gain Knowledge on Exercise Physiology and Nutrition for Physical Activity
- Comprehend the Technique and Gadgets for Physical Activity Training
- Understand the Risks of Hypokinetic Diseases
- Understand the principles of Exercise and Stress Management

**Learning Outcomes:**

Upon successful completion of the course students shall be able to:

- Explain the principles of physical fitness and nutrition (such as body composition, energy intake, energy expenditure, and the acute and chronic physical changes related to exercise and nutrition) complement each other in helping to develop physiological well-being and overall health.
- Explain the principles of fitness and nutrition (such as setting realistic short-term behavior change goals and the relationship of exercise and diet to stress reduction) complement each other in helping to develop psychological well-being and overall health.
- Identify some of the social and cultural influences on food habits and exercise/activity patterns.
- Evaluate current nutritional information with regard to its contribution to Health and physical fitness.

**Course Content****Unit-I. Health and Fitness**

- 1.1 Definition, Components and Relationship among Physical Fitness, Wellness and Health
- 1.2 Personalized approach
- 1.3 Benefits of fitness training

## **Unit-II. Exercise Physiology and Nutrition for Physical Activity**

- 2.1 Pulmonary ,Cardiovascular Regulation and integration,
- 2.2 Skeletal and neural control,
- 2.3 Endocrines and exercise
- 2.4 Nutrition & Physical performance
- 2.5 Physical fitness: cardio respiratory fitness, muscular strength, muscular endurance, body composition and flexibility
- 2.6 Energy systems, muscles and physical performance-ATP-CP energy systems, Lactic Acid energy systems, Oxygen energy systems, Glycogen depletion
- 2.7 Endurance Training-Muscle and Muscle fibers
- 2.8 Optimal Nutrition and Energy needs for optimum performance e.g. athletes
- 2.9 Exercise and fluid loss
- 2.10Hydration
- 2.11Nutrition supplements, Ergogenic Aids

## **Unit-III.Physical Activity Training**

- 3.1 Aerobic and anaerobic training -To enhance Cardio Vascular Endurance,
- 3.2 Flexibility and Body Composition,
- 3.3 Measurement of PAL,
- 3.4 Benefits of Fitness training and Gadgets for measuring PA –
- 3.5 Motorized Treadmill, (aerobic Fitness),
- 3.6 Functional Trainer,
- 3.7 Fluid Rower (Upper body),
- 3.8 Elliptical Bicycle and
- 3.9 Bicycle Ergometer (Lower body),
- 3.10Stretch Trainer (Whole body),

3.11 Multi Gym (9, 12, 16 station) for different muscle groups

#### **Unit-IV. Diseases due to Faulty/Poor Food Habits and Physical Inactivity**

Life Style related diseases/disorders (Non communicable Disease conditions) - Meaning Causative Factors and Diet Modification/evidence based guidelines for

- 4.1 Underweight,
- 4.2 Obesity,
- 4.3 Diabetes mellitus,
- 4.4 Hypertension,
- 4.5 Cancer
- 4.6 Cardiovascular Disease,
- 4.7 Anemia

#### **Unit-V. Exercise, Stress and Health Management**

- 5.1 Stress Assessment and Management
- 5.2 Techniques-Exercise at medium and high altitudes, Underweight, Overweight and Obesity, Relaxation Techniques,
- 5.3 Yoga and Meditation for Health,
- 5.4 Clinical Exercise
- 5.5 Physiology for Cancer,
- 5.6 CV and Pulmonary rehabilitation

#### **Practical**

- 1. Aerobic and Anaerobic Exercises
- 2. Relaxation Techniques,
- 3. Stress Assessment and Management
- 4. Yoga and Meditation
- 5. Visit to Fitness Centre: Observational report and 2 Case studies
- 6. Desk review of ergogenic aids available in the market
- 7. Use of non-invasive equipment's like Pedometer, pulse oximeter, step test, Omron's body composition analyser, home monitoring BP equipment to assess the nutritional status

## **Learning Experiences**

Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICT enabled teaching and learning experiences in terms of video lessons and documentary film shows.

## **Evaluation**

Announced and unannounced class tests, seminars and assignments and Record works related to their Practical works.

## **Reference**

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- Mahan, K and Stump, E. S (1996) Krause *Food and Nutrition and Diet Therapy* W.B Saunders Company, USA.

**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Medical Nutrition Therapy**  
**(Credits: Theory-4, Practical-2)**

**Course Description**

This course prepares the students to use advanced knowledge about food and nutrition for prevention as well as treatment of diseases and also maintain human health. Dietetics focuses on food management through proper planning, preparation, monitoring, implementation and supervision of a patient's modified diet and to develop basic counselling skills as dietitian.

**Learning Objectives**

- Understand the role of dietitian and to maintain good nutritional status, correct deficiencies or disease conditions of the patients
- Gain knowledge on the principles of diet therapy and designing or formulating different therapeutic diets for various disease conditions
- Develop skill to plan and prepare therapeutic diets for prevention of disease conditions
- Diet therapy may include prescribing specialized dietary regimes or meal plans. As entrepreneur.

**Learning Outcomes:**

- Integrate knowledge of research principles and methods associated with nutrition and dietetics practice.
- Use effective and appropriate communication skills in providing information, advice and professional opinion to individuals, groups and communities.
- Collect, organize and assess data relating to the health and nutritional status of individuals, groups and populations.
- Demonstrate initiative and judgment using a professional, ethical and entrepreneurial approach advocating for excellence in nutrition and dietetics.
- Independently plan and execute a research project in regard to nutrition and dietetics practice.

**Course Content**



**Unit-I. Concepts in diet therapy**

- 1.1 Growth and Scope of Dietetics
- 1.2 Purposes and Principles of Therapeutic Diets
- 1.3 Modifications of Normal Diets
- 1.4 Classification of the Therapeutic Diets,
- 1.5 Role of Dietitians
- 1.6 Characteristics of Dieticians,
- 1.7 Diet Counseling, Team Approach to Nutritional Care, Principles of Food Prescription
- 1.8 Indian Dietetic Association,
- 1.9 Computer Assisted Instructions (CAI) - Diet Planning using computers, Use of Technology in diet counseling.

**Unit-II. Medical Nutrition Therapy in Obesity, Underweight and Diabetes****Mellitus**

Etiology, Pathophysiology, Clinical symptoms, metabolic alterations, Assessment/Indicators, Lifestyle & Dietary guidelines for the following conditions

- 2.1 **Obesity** (Bariatric Surgery: types, Management)
- 2.2 **Underweight**
- 2.3 **Diabetes Mellitus** (Acute and Chronic Complications of Diabetes  
Diet Modifications, Use of Food Exchange Lists, Insulin-Types and Use, Oral Hypoglycemic Agents, Carbohydrate counting, Glycemic Index, Glycemic Load)

**Unit-III. Medical Nutrition Therapy in GastroIntestinal Disorders and Diseases of the liver**

Etiology, Pathophysiology, Clinical Symptoms, Assessment/Indicators, Lifestyle & Dietary guidelines for the following conditions

- 3.1 Diarrhea,
- 3.2 Dysentery,
- 3.3 Constipation and

3.4 Peptic Ulcer

3.5 Jaundice

3.6 Hepatitis

3.7 Fatty Liver

3.8 Cirrhosis

3.9 Hepatic Coma

## **Unit IV. Medical Nutrition Therapy in Diseases of the Cardio Vascular**

### **System and Kidney Diseases**

Etiology, Pathophysiology, Clinical Symptoms, Lifestyle & Dietary guidelines for the following conditions:

4.1 Atherosclerosis,

4.2 Hyperlipidemia,

4.3 Ischemic Heart Disease,

4.4 Congestive Heart Failure,

4.5 Bypass Surgery

4.6 Hypertension (DASH Diets)

4.7 Nephrotic Syndrome

4.8 Nephrolithiasis

4.9 Acute and Chronic Renal Failure

4.10 Dialysis – Principles and Types

4.11 Kidney Stones

## **Unit-V. Medical Nutrition Therapy for Fever, Food Allergy and Cancer**

### **Febrile Conditions**

5.1 **Acute and chronic infectious disease**-Typhoid, Tuberculosis And HIV and AIDS

a. Guidelines for management of tuberculosis and infectious diseases.

5.2 **Food Allergy** - Definition, Causes, Science and Symptoms, Types of Allergy, Diagnosis, Dietary Modifications

5.3 **Gluten sensitivity and Lactose intolerance**

5.4 **Cancer:** Etiology, Metabolic alterations, Types of Cancer, Dietary Recommendation for Cancer Survivors. Nutritional therapy for Cancer

### **Practical Topics**

1. Preparation of Hospital Diets- Modification of diet with respect to texture, consistency and nutrients
2. Modification of Diets in Obesity
3. Modification of Diets in Underweight
4. Modification of Diets in Diabetes Mellitus
5. Diets for Febrile Conditions – TB, Typhoid
6. Modification of Diets in Peptic Ulcer, Constipation and Diarrhoea
7. Modifications of Diets in Liver Diseases – Jaundice, Hepatitis and Cirrhosis
8. Diets for Nephritis, renal Failure and renal Calculi, Protein Restricted Diets
9. Diets for Cardiovascular diseases – Sodium Restricted, Fat Controlled
10. Modification of Diet for Cancer Patients and HIV Infected Person
11. An Overview/desk review on DASH diet, Mediterranean diet, Paleo diet, FODMAP diet, Keto diet VLCD etc.

**\*\*\*As recommended by the Board of Studies of the University**

### **Learning Experience**

- Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICT enabled teaching and learning experiences in terms of video lessons and documentary film shows.

### **Evaluation**

- Announced and unannounced class tests, seminars and assignments and Record works related to their Practical's

**Reference**

- Srilakshmi, B. *Dietetics* ,New Age International P. Ltd., New Delhi, 2018.
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- Nelms M, Sucher K (2015). *Nutrition Therapy and Pathophysiology*. (3<sup>rd</sup> edition) Cengage Learning, USA. ISBN-13: 978-1305111967, ISBN-10: 1305111966

## **DISCIPLINE SPECIFIC ELECTIVE**

### **Food Safety, Sanitation and Hygiene**

#### **(Credits: Theory-4, Practical-2)**

#### **Course description**

A study of food safety, hygiene and sanitary practices in food industries causes investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards.

#### **Learning objectives**

- Learn the various aspects of food safety
- Understand about food laws and labeling
- Understand the need for consumer education

#### **Learning outcomes**

- Upon completion of this course, the student will be able to: 1. Identify causes of and prevention procedures for food-borne illness, intoxication, and infection.
- Demonstrate good personal hygiene and safe food handling procedures; describe food storage and refrigeration techniques; explain sanitation of dishes, equipment, and kitchens including cleaning material, garbage, and refuse
- Discuss Occupational Safety and Health Administration (OSHA) requirements and effective workplace safety programs

#### **Course Content**

#### **Unit-I. Introduction to Food Safety and adulteration Basic Principles of Food Safety**

- 1.1 Food contamination: definition
- 1.2 Sources of contamination
- 1.3 Difference between food poisoning and food infection
- 1.4 Safety in food processing-a. Food procurement; b. Storage; c. Handling; d. Preparation e. Safety of leftover foods
- 1.5 Framework for creating enabling environment for serving safe & nutritious food at the

workplace.

1.6 Regulatory compliance requirements for the canteen establishments

1.7 Safe & nutritious food tips for the employee

1.8 Factors affecting food safety and food spoilage:

1.9 Food adulteration - definition, types of adulteration in various foods- intentional, incidental and metallic contaminants

## **Unit-II. Food Laws and Regulations**

2.1 National Legislation – Essential Commodities Act,

2.2 Standard of Weight and Measures Act, ISI, Mark of BIS, Agmark and PFA, FPO,

2.3 Food Safety and Standards Bill 2005,

2.4 International Laws and Agreements - FAO, WHO, Codex Alimentarius, WTO, JEFA, APEDA, ISO 22000 series,

2.5 Hazard Analysis Critical Control Point (HACCP): principles of HACCP, applications of HACCP

## **Unit-III. Current Food Safety Standards in India**

3.1 Current Food Safety regulations 2001,

3.2 Food Safety and Standards Authority of India,

3.3 objectives of developing food safety standards,

3.4 enforcement of structure and procedure,

3.5 role of food analyst, safety analysis, action by designated officer and report of food analyst

3.6 Food Safety Management System (FSMS)

3.7 Good Practices/ PRPs - HACCP, GMP, GHP

3.8 Management Element / System

3.9 Statutory and regulatory requirements

3.10 Certification - HACCP, ISO 22000, FSSC 22000

## **Unit-IV. Sanitation Procedures**

- 4.1 Basic Principles of Hygiene and Sanitation
- 4.2 Personal hygiene and Environmental hygiene
- 4.3 Methods of Sanitation and Hygiene
- 4.4 Sterilization and disinfection using heat and chemicals
- 4.5 Waste product handling and control- Solid and liquid waste disposal
- 4.6 Control of infestation- Pest control
- 4.7 Cleaning and sanitizing- need for efficient cleaning program, cleaning agents, equipment's,
- 4.8 Methods to wash, rinse and sanitizing food contact surfaces.
- 4.9 Importance and methods of pest control;
- 4.10 Outlining methods of disposal of liquid, solid and gaseous waste

## **Unit-V. Importance of Personal hygiene of food handlers**

- 5.1 General principles of hygiene – personal and environmental hygiene,
- 5.2 hygienic practices in handling and serving foods,
- 5.3 planning and implementation of training programme for health person

## **Practical**

- 1. Microbiological Examination of different food samples
- 2. Bacteriological Analysis of Water
- 3. Assessment of surface sanitation by swab/rinse method
- 4. Assessment of personal hygiene
- 5. Biochemical tests for identification of bacteria
- 6. Scheme for the detection of food borne pathogens
- 7. Detection of common adulterant in food: i) Khesari flour in besan ii) Vanaspati in Ghee/Butter. Dried papaya seeds in black pepper, metanil yellow in turmeric or colored sweet products and artificially foreign matter in tea (dust/leaves).

## **Learning Experiences**

- Regular lectures, demonstrations, Exercises on observation and follow up with
- Group discussions, case studies, ICTenabled teaching and learning experiences in terms of video lessons and documentary film shows.

## **Evaluation**

- Announced and unannounced class tests, seminars and assignments and Record works related to their Practical's.

## **Reference**

- Mahtab, S, Bamji S, Kamala Krishnasamy,.Brahmam G.N.V, *Text Book of Human Nutrition*, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi, 2012.
- Srilakshmi, B., *Dietetics*, New Age International (P) Ltd., New Delhi, 2013.
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- *Dietary Guidelines for Indians*, ICMR, National Institute of Nutrition.



**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Public Health Nutrition**  
**(Credits: Theory 4 & Practical 2)**

**Course description**

The focus of this course is to examine the role of the dietician/nutritionist in identifying health and nutrition problems and integrating nutritional services with medical and social services within the community. This course will also provide basic knowledge and skills relevant to the practice of community nutrition, the concept of community, the role of nutrition in health promotion and perspectives for resolving community nutrition problems, Needs for assessment issues and national and state community nutrition programs, determinants of health outcomes, measurement of nutrition and health status, food and nutrition policy, legislative issues and management of community programs.

**Learning objectives:**

- To know the basics of public health nutrition
- To understand the need of prioritizing nutrition issues
- To assess the nutritional and Health Status of an individual and the community.
- To learn nutritional programmes and policies to overcome malnutrition
- To understand various national and International nutritional organizations for combating malnutrition
- To apply ICT in the formulation of community nutrition education programme

**Learning outcomes:**

- Finally, the concepts and knowledge required for the delivery of community nutrition services will be applied to program planning, intervention and program evaluation
- Gaining knowledge on nutritional programmes and policies overcoming malnutrition
- Understanding the national, international and voluntary nutritional organizations to combat malnutrition
- Able to organize community nutrition education programme with the application of computers.
- Apply immunological intervention programmes to overcome epidemic of communicable diseases.

**Course Content****Unit-I. Introduction to public health nutrition a National development**

- 1.1 Meaning and Scope of Public Health Nutrition
- 1.2 Roles and responsibilities of public health nutritionists
- 1.3 Definitions of optimum health, malnutrition (under nutrition, overweight, obesity, micronutrient deficiency ), nutritional status, nutrition intervention, food and nutrient supplements, , nutrition education, morbidity, mortality rates
- 1.4 Nutrition – A Global Developmental Priority
- 1.5 Importance of nutrition throughout the life cycle
- 1.6 dual burden of malnutrition
- 1.7 Sustainable Development Goals (SDGs), 12 of the 17 Goals require good nutrition to be met
- 1.8 Ecology Consequences and of Malnutrition,
- 1.9 Strategies To Overcome Malnutrition
- 1.10 Relation of nutrition to national development
- 1.11 Nutrition and food security

## **Unit-II. Nutritional assessment**

Introduction, Definition of Nutritional Status, Instruments, Standard of Reference, Age Assessment, Measurement Techniques, Weight, Linear Measurement/Height, Circumferences, Soft Tissue Subcutaneous Fat, Objective and Classification of nutritional assessment Methods

Overview of nutritional status assessment methods:

**Direct Nutritional Assessment parameters** - (anthropometry, clinical signs and symptoms, dietary assessment and biochemical parameters); ecological parameters – environment, Food prices, and indirect parameters – SES, Mortality and Morbidity rates

- **Anthropometry measurements**
- Techniques commonly used in public health (weight for age, weight for height, height for age & BMI for age), Comparison of indices with references
- The new WHO growth standards, its use and implications and classification to define mild, moderate & severe forms of malnutrition
- New WHO growth standards for Adolescents, implications of introducing new standards in school health program)

- **Biochemical Estimation**

Name of assessment of parameters, Reference value/Desirable Level of nutrients and their metabolites in body tissues

- Lipids & Lipoproteins (TG, LDL and HDL cholesterol and their ratios)
- Carbohydrates (blood and urinary glucose)
- Protein (serumprotein, albumin, NEAA/EAA ratio, hydroxyproline index, urea/creatinine ratio, etc.)
- Iron (Hb, HcT, serum iron, transferrin, ferritin)
- Vitamin A (serum retinol, carotene)
- Vitamin D (serum alkaline phosphatase, calcium and phosphorous)
- B-complex vitamins, including Folic acid & Vitamin B12 (urinary excretion)
- Vitamin C (serum ascorbic acid, whole blood ascorbic acid)
- Iodine (T3, T4, urinary excretion)
- Sodium, potassium and chloride
- Fluoride
- TB Test, HIV Test CD4 counts
- **Clinical Examination** of common nutritional deficiencies
- Specific nutrient Deficiency signs & symptoms (Vitamin A, Iron, Iodine, Zinc U, B complex vitamins etc.)
- Grouping of Signs
- **Dietary Survey and Types of Nutritional Survey**
- Dietary intakes methods and understanding their usage and limitations in different field situations: 24-hour diet recall methods; Food frequency method; Weighed food inventory; food diaries and food composition methods
- Rapid assessment methods for dietary intake
- Dietary Diversity Score for Household, Individual, women and children

**Indirect Nutritional Assessment parameters**

- Vital Statistics, Age Specific Mortality Rate, Morbidity and Cause of Specific Mortality.

**Unit-III. Social & behavior change communication**

**Concepts, components and process of communication for nutrition health promotion**

- Definitions of Formal – non-formal communication, Participatory communication
- Components of BCC( Sender, Message, Channel, Receiver)
- Various types of communication – interpersonal, mass media, visual, verbal/ non-verbal.
- need of SBCC in India
- Social ecological model and communication for development (C4D) approach

### **Concepts and Theories of Social and Behavior change Communication**

- Definitions ,Three characteristics ,Ten overarching principles for developing SBCC program or campaign
- Steps for developing a successful Social and Behavior change communication program
- Evaluating and replanning
- Training workers in nutrition education programmes
- Methods of education when to teach, whom to teach
- Use of computers to impart nutrition education
- Organization of Nutrition education programmes

## **Unit –IV. National, international and voluntary organizations to combat malnutrition**

### **Role of Nutrition in Achieving Global Targets**

- Optimal Infant and Young Child Feeding: Significance of the first 1000 days of life
- Improving maternal, infant and young child nutrition – WHO Global Targets 2025
- Nutrition Intervention programmes in India –
- Integrated Child Development Services (ICDS): ICDS Mission Mode, ICDS mission in various states
- Role of AWW; Supplementary Nutrition, Bal bhog, Sakhibhog, Shishubhog
- Mid-Day Meal (MDM) program
- Fortification program

### **National Programs to Combat Micronutrient Malnutrition**

- Iron: National Nutritional Anemia Control Program, Nutritional Program for Control of Anemia among Adolescent Girls, National Iron Plus Initiative (NIPI)

- Vitamin A: Vitamin A Prophylaxis Program (VAPP)
- Iodine: National Iodine Deficiency Disorders Control Program (NIDDCP), Universal Salt Iodization (USI), Double Fortified Salt (DFS)
- Diarrhea Control Program: Role of Zinc, ORS and National Deworming Campaign
- Fluorosis Control Program

#### **Organizations Working towards Meeting Global Nutrition Targets**

- National organization – ICAR, ICMR, CSWB, SSWB, NNMB, NIN, CFTRI, DFRL, NIPCCD and NFI, Save the Children, Tata Trusts
- International Organizations - World Bank, World Health Organization (WHO), United Nations International Children’s Emergency Fund (UNICEF), World Food Programme (WFP), Bill and Melinda Gates Foundation
- Voluntary organizations – Global Alliance for Improved Nutrition(GAIN) Micronutrient Initiatives, CARE, CRS, AFPRO, IDA; World Alliance for Breastfeeding Action (WABA)

### **Unit-V.Epidemiology of communicable diseases**

- Definition, causes, signs and symptoms, treatment and prevention of communicable diseases, Respiratory infections and intestinal infections,
- Other infections- dengue, Flu
- Types of immunity- active, passive and herd-group protection
- Immunization agents- vaccines, immunoglobulin
- Immunization schedules - National and WHO Expanded Programme on Immunization- Universal Passive, Combined, Chemoprophylaxis, non-specific measures

#### **Related experience (Practical)**

- Assessing the nutritional status of an individual, group and community in different settings
- Conducting 3 Day Weighment Survey for an Individual
- Planning and conducting nutrition education programmes in a selected village for 3 days
- Spot observations based on the observations through field visits in ICDS centres, MDM school programme

## Learning experience

Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICTenabled teaching and learning experiences in terms of video lessons and documentary film shows.

## Evaluation

Announced and unannounced class tests, seminars and assignments and Record works related to their Field /community stay Camp/Practical works.

## References

- Park A. (2007), Park's *Textbook of Preventive and Social Medicine* XIX Edition M/S Banarasidas, Bharat Publishers, 1167, Prem Nagar, Jabalpur, 428 001(India)
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- WHO.<http://www.who.int/>
- National Guidelines on Infant and Young Child Feeding. [wcd.nic.in](http://wcd.nic.in)
- WHO Non-communicable diseases and risk factors. <http://www.who.int/ncds/en/>
- [National Nutrition Mission – ICDS. icds-wcd.nic.in](http://www.nmmission.org/)
- Ministry of Health & Family Welfare, [www.mohfw.nic.in](http://www.mohfw.nic.in)
- Field guide to designing communication strategy, WHO publication-2007
- Communication for Development (C4D) Capability Development Framework, UNICEF and 3D Change, 2009
- Health education: theoretical concepts, effective strategies and core competencies: a foundation document to guide capacity development of health educators/World Health Organization. Regional Office for the Eastern Mediterranean, 2012

**DISCIPLINE SPECIFIC ELECTIVE COURSE****Principles of Interior Design  
(Credits: Theory: 4; Practical.2)****Course Description**

Designing in modern day's gains significance both in terms of planning an interior space functionally as well as aesthetically. The Course exposes the students to the concept of interior design and the trends emerging periodically in terms of purpose, materials and methods. Furthermore they get an opportunity to have hands-on experience in using the basic elements and principles of design in day to day living

**Learning Objectives**

- Gain knowledge and interpret the elements and principles of art in interior design
- Use the elements and principles to create beautiful designs and interiors
- Apply theoretical knowledge for practical situations
- Decipher the nuances of Indian interior design

**Learning Outcomes**

- Appreciate growth and development of interior design and decoration in India
- Enabling students distinguish between Interior decoration and Interior design
- Analyze place of elements and principles in interior designing
- Gain knowledge on Institutes offering Interior design as professional Courses

**Course Content****Unit I. Interior Design vs. Interior Decoration**

1.1 Interior Design and Interior Decoration: concept and basic differences

1.2 Aims of Interior Design: Beauty, Expressiveness and Functionalism

1.3 Interior decoration in India: History, growth and development

1.4 Characteristics - cultural and ethnic influences

1.5 Popular interior designers in India Interior designer – definition and functions,

1.6 Characteristics of an Interior designer

1.7 Interior Design Institutes in India

1.8 IIDA – International Interior Design Association; IIID- Institute of Indian Interior Designers – vision and functions

## **Unit II. Fundamentals in Designing**

- 2.1 Design: Definition and classification
- 2.2 Structural design – importance and requirements of good structural design
- 2.3 Decorative design – importance and requirements of good decorative design
- 2.4 Classification of decorative design- naturalistic, conventional, geometric, abstract, historic and biomorphic
- 2.5 Relation of good taste and perception of Interior Design

## **Unit III.DesignElements**

**3.1 Elements of design:** Meaning, importance, characteristics of each element and their use in designing

**Line-** meaning and definition, types-actual, implied, psychic and purpose

**Line and direction-**vertical, horizontal, diagonal, curved, zigzag;

**Shape and form:** meaning and basic difference between the two

Elements of shapes and forms- types- 2D - square, triangle, circle and polygons and their 3D forms – cube, pyramid/cone, sphere etc

Rectilinear Vs angular forms

**Space** – meaning and perception, negative and positive space, significance in designing

**Size** – small to large

**3.2 Texture** – meaning and classification- tactile and visual textures, structural and applied

Texture; Use of Textures in Interiors –Texture and Scale , Texture and Light, Texture and Light, texture and Colour

**3.3 Colour** –spectrum, Theories, qualities, The Prang Colour System, Effects of colour Coliur (Physic Physical, Emotional)Principles of design in use of colour,Colour schemes(related, contrasting), consider: the choice of colour in different rooms

**3.4 Pattern and ornamentation** – conceptual meaning, significance in designing;

Guidelines to use pattern in design

Motifs types and arrangement; Motif development- fundamental step in designing process

**3.5 Light-** significance, emotional effect, types and use



## **Unit IV Design Principles**

### **4.1 Principles of design - Meaning, nature, types and significance in designing**

- **Balance:** meaning and definition, classification
- **Rhythm:** meaning and definition, types
- **Emphasis**– meaning and definition, types and methods of achieving
- **Proportion:** meaning and definition, Greek/Golden oblongin space division, concept of scale and law of space relationship in designing
- **Harmony:** meaning and definition, methods of achieving

### **4.2 Evaluation of design-criteria for evaluation**

## **Unit V Accessories in Interiors**

### **5.1 Accessories: Definition and importance**

Classification – functional, decorative and both

- Selection and placement of accessories
- Pictures as accessories - types of picture, selection of pictures, mounting , framing and hanging
- Art objects as accessories – wall hangers and paintings
- Crafts as accessories - pottery, wood craft, basket making;
- Sculpture, Antiques, indoor plants and flowers as accessories

## **Practical**

1. Interview with an Interior designer – submission of report as a case study
2. Create an album with professional details on any five popular interior designers in India
3. Developing design using basic motif for various application in interiors – minimum five applications.
4. Evaluation of art objects for design, elements, principles, colour, material and purpose - minimum five objects.
5. Designing greeting cards for different occasions - any five occasions.

6. Developing design suitable for application on textiles – Saree border, curtain, cushion/slip covers, and hand kerchiefs and tapestry
7. Developing design for floor decoration - Flower carpet, Rangoli, Alpana
8. Area arrangement using principles of design and colour – living, dining, bed, pooja and children’s room.
9. Creating commercial displays using principles and colours – textiles display, handicrafts, reception area in star hotels and corporate offices
10. Developing designs suitable for accessories – structural and decorative
11. Exercise on mounting of pictures using ‘Law of margins’ – vertical, horizontal, square
12. Preparing wall hangings using art principles – any two wall hangings
13. Preparing a portfolio on all art work/ objects done and antiques
14. Display of all exercises done for evaluation by the teacher
15. Submission of complete, bound record work

### **Learning Experiences**

- Flipped classrooms, blended learning, workshops, portfolio making, lectures, demonstrations

### **Evaluation**

- Class tests, survey reports, interview reports, assignments, display of exercises done, submission of complete record of practical done, submission of portfolio on a specific topic, area arrangement, model making

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**Designing and Furnishing Life Space**  
**(Credits: Theory - 4, Practical - 2)**

**Course Description**

The Course introduces the concepts of life space, it's designing and furnishing as a unified/complete entity. Further the Course while disseminating knowledge on various styles, types and construction of furniture highlights their significance in furnishing the life space-the abode of rest, peace and comfort - for the inmates. Students get exposed to the triad contributing to one's life space-design and décor, furniture and furnishing.

**Learning Objectives**

- Comprehend the concept of life space
- Learn skills of designing life space
- Gain knowledge on different styles in furniture
- Understand the role of furnishings in designing and decorating interiors

**Learning Outcomes**

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

**Course Content****UNIT I: Concept of Life Space**

- 1.1 Objectives and process of planning life space-biological needs, ecological concerns, cultural influences, psychological effects, utility, economy, beauty and character
- 1.2 Factors determining life space in interiors- people, location and orientation, resource available, activity zones in life space, schematic diagram
- 1.3 Trend setting from spacious to compact interiors and multi-storeyed buildings

**UNIT II Furniture in the Life Space**

- 2.1 Importance of furniture in relation to interiors, salient features of traditional, contemporary and modern styles in furniture
- 2.2 Furniture types-Modular furniture and mobile furniture; Case goods and upholstered furniture; multi-purpose furniture
- 2.3 Materials used and construction of furniture-joints, finishes; Construction of upholstered furniture

**UNIT III Furniture Selection and Arrangement**

- 3.1 Factors considered in selection of furniture to suit different spaces and purposes
- 3.2 General guiding concepts in arrangement of furniture
- 3.3 Arrangement of furniture in different rooms
- 3.4 Trends in furniture – impact of materials and methods, Ergonomics, space saving, innovation
- 3.5 Care and maintenance of furniture

**UNIT IV Furnishings for Designing Life Space**

- 4.1 Conceptual meaning and definition of design, elements and principles of design
- 4.2 Supportive elements as functional and aesthetic aspects – role of colour and light in designing life space – Prang colour system and colour harmonies; sources and effect of lighting
- 4.3 Conceptual meaning of furnishings – definition and classification – soft, hard, resilient; selection and basic use in life space
- 4.4 Home furnishings as accessories, floor, wall and ceiling decorations, selection and use
- 4.5 Types of windows, window treatments –Hard (shutters, rollers, blinds, shades), Soft (curtains, draperies, swags, valances).
- 4.6 Window accessories: chords, rings, rods, trims, and decorative products.
- 4.7 Developing innovative designs for window treatments

**UNIT V Home Furnishings and Accessories**

- 5.1 Goals involved in furnishing interiors
- 5.2 Factors influencing furnishing decisions: climatic conditions, needs and preferences, principles of design, availability etc

- 5.3 Selection of furnishings based on background – walls, floors and ceilings
- 5.4 Selection, care and maintenance of different home furnishings-slip covers, cushion covers, bed linen, bath linens, and kitchen linens.
- 5.5 Role of accessories as furnishing components - Functional and decorative – fabric based lamps, painting, wall hangings and soft toys
- 5.6 Alternate means of improving home furnishing conditions: elimination, concealment, rearrangement and supplementation.

### **Practical**

1. Identifying different styles in furniture
2. Visit to a manufacturing unit of a furniture shop and observing the construction of case goods and upholstered furniture
3. Survey of consumers to find out the factors considered while selecting furniture
4. Listing furniture requirements for various activities carried out in a household
5. Arranging furniture for different rooms in a living space using cut outs
6. Collecting pictures of rugs and carpets used in interiors
7. Drawing different methods of treating windows and developing an innovative design for treating windows
8. Observing the advantages and disadvantages of living in multi-storied buildings and individual houses for life space satisfaction
9. Drawing Prang Colour chart
10. Applying different colour harmonies to an outline of three dimensional interior and identifying its effects
11. Visit to few modern interiors (residential and commercial) to observe the selection and fixing of various lighting fixtures
12. Collecting pictures of various rooms interiors in residences and identifying the accessories and soft furnishings used in it
13. Demonstrations on different types and styles of flower arrangement
14. Workshop on construction of soft window treatments

## Learning Experiences

- Lectures, power point presentations, conduct of market surveys, demonstrations, workshops, record work, field visits and arranging mock spaces.

## Evaluation

- Class test, record submission and assignments, survey reports, case studies, model making, area arrangement,

## References

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## **DISCIPLINE SPECIFIC ELECTIVE COURSE**

### **Creative Applied Arts (Credits: Theory: 4; Practical:2)**

#### **Course Description**

Introducing students to the discipline of Applied Arts is a dire need to divert young minds from too much of academics to lighter enjoyable exercises. It would prove an attempt to initiate in them an opportunity to develop and kindle their senses in fine and applied arts, a viable avenue for lifelong learning.

#### **Learning Objectives**

- Appreciate aesthetics of arts and crafts
- Develop and practice nuances of creative arts
- Inculcate skills through hands – on experience in applied arts
- Understand and appreciate major work of artists.

#### **Learning Outcomes**

- Comprehend significance of art concepts as an integral component of man's living styles from bygone days
- Customize/ optimize use of visual and applied arts, accessories and antiques for designing interiors and other aspects
- Realize learning as an enjoyable stress free experience resulting in lifelong learning
- Expand knowledge and equip skills and emerge as self employed freelancers

#### **Course Content**

##### **Unit I Introduction to Visual Art**

- 1.1 Meaning and philosophy of art; categories of art related to interior design and architecture:  
*visual, plastic, decorative, applied arts*
- 1.2 Type of arts and designs - Visual art and graphic art; visual design and graphic design
- 1.3 Drawing using different methods and techniques

## **Unit II Materials Used in Works of Art**

- 2.1 Materials and their use in applied arts – wood, earthenware, ceramics, glass, plastics and metals
- 2.2 Availability, processing and use
- 2.3 Ornamentation and fine tuning techniques

## **Unit III Introduction to Art Forms**

- 3.1 Concept of design; ABC of basics of design – **A**esthetics, **B**asic design and **C**reativity: their significance in design development
- 3.2 Varieties of art: Art, abstract and surreal
- 3.3 *Two dimensional art forms: Graphics*: Meaning, types – hand process and mechanical process- relief, intaglio, planography
- 3.4 *Three dimensional art forms: Sculpture*: meaning, types – relief, free standing, Process in sculpture – subtractive, additive and replacement

## **Unit IV Applied Arts for Functional/ Aesthetic Use**

- 4.1 Painting – water, oil, pot, Madhubani, Worli, Fresco
- 4.2 Pottery
- 4.3 Puppetry
- 4.4 Table setting
- 4.5 Jewelry making
- 4.6 3D printing
- 4.7 Floor and wall decorations – kolam, alpana, flower carpets, rangoli

## **Unit V Study of Major Work of Artists**

- 5.1 Foreign artists – Michelangelo, Leonardo da Vinci, Raphael Sanzio, Pablo Picasso, Vincent van Gogh
- 5.2 Indian artists – Raja Ravi Varma, R.K. Laxman, M.F. Husain

**Practical**

1. Template and model making
2. Developing designs for greeting cards, wall hangers, jewelry and dress making
3. Making paper bags, lamp shades and other accessories
4. Wealth from waste product making
5. 2D design drawing - techniques of drawing, rendering and painting (water, oil)
6. 2 d art forms – Collage, decoupage, stencil, puppetry
7. Painting - Worli and Madhubani
8. Floor decorations – Kolam, Alpana, Rangoli, flower carpet, floating rangoli
9. Accessories – Macreme, pottery, soft toys, terrarium, Paper Mache and real time (working) fountains
10. Mock up spaces and area arrangement
11. Table setting; fruit and vegetable carving
12. Collection and display of antiques and posters
13. Collection and analysis of paintings/ work of art of famous artists
14. Evaluation of art forms
15. Interviews with contemporary artists
16. Field visits to museums, art gallery
17. Lecture cum demonstration of graphic and visual art by experts
18. Visit to commercial units making pottery, jewelry, furniture etc
19. Display of art objects
20. Prospects for Self employment by selling the Art pieces in bulk
21. Submission of a complete record on practical work and portfolio on specified topics

**Learning Experiences**

- Flipped classrooms, blended learning, workshops, portfolio making, lectures, demonstrations, workshops, field visits, face to face interview with experts, ICT based exposures

## Evaluation

- Class tests, survey reports, interview reports, assignments, display of exercises done, submission of complete record of practical done, submission of portfolio on a specific topic, area arrangement, model making, mock up spaces, practical tests, Viva Voce

## References

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**DISCIPLINE SPECIFIC ELECTIVE COURSE****Garden and Landscape Designing  
(Credits: Theory - 4, Practical - 2)****Course Description**

The Course develops among the students the core principles, types and components of landscape gardens. It provides experiential learning by upgrading their skills in designing various residential and commercial landscape plans. It can further motivate them to develop and maintain indoor garden.

**Learning Objectives**

- Gain knowledge to identify different types of garden by adopting the principles and design elements
- Understand the importance of cultivating ornamental plants and their scope in entrepreneurship
- Learn about raising of indoor plants and their maintenance
- Draft landscape plans for commercial and residential sectors

**Learning Outcomes**

- Distinguish different ornamental plants and their commercial/ aesthetic significance
- Comprehend methods of propagation and commercialization of ornamental plants
- Analyse value addition of ornamental plants and flowers for aesthetics and entrepreneurship
- Draft sketches/ drawings/layouts of various gardens

**Unit 1 Concept and Classification of Landscape Garden**

1.1 Definition, Importance and Scope of landscape garden

1.2 Types of Gardens -English garden, French garden, Mughal garden, Japanese garden, Italian garden and Persian garden

1.3 Gardens based on styles-Formal , Informal and Free style

1.4 Gardens based on design-Terrace, Roof, Vertical, Window, Balcony, Container , Kitchen gardening

1.5 Gardens based on water requirement – Xeriscape (water efficient) gardens

**Unit II Layout and Design Principles in Landscape**

**2.1**Layout- The foreground area, The private living area and The service area

2.2 Design Elements-Line, Form, Color, Texture, Space and Pattern in garden layouts

2.3 Beauty Principles-Balance, Proportion, Scale, Rhythm and Harmony – adoption in garden and landscape layouts

### **Unit III Components of Landscape Designing**

3.1 Classification of ornamental plants: Annual, Biennial and Perennial

3.2 Softscape: Trees, plants, mulches, climbers and creepers, edges and hedges, flowers beds, shrubs., lawns, topiary and trophy

3.3 Lawn: meaning and importance of lawn, preparation of land for laying lawn, methods of raising lawn, types of lawn grass , plants suitable for lawn and ready to use lawn as saleable products

3.4 Hardscape: Sidewalks, walls and fences ,pavers, rocks, decks and patios, ponds and pools, garden benches or other seating, gazebos, walkways and driveways

### **Unit IV Indoor Gardening, Garden Décor and Adornment**

**4.1** Factors considered for growing indoor plants, selection and placement ,types of indoor plants ,care and maintenance

**4.2** Basic requirements for maintenance of garden plants-temperature, light, water, air, nutrients and space. garden tools and equipments, insecticides and pesticides, pruning methods

4.3 Bonsai-plants suitable for bonsai culture, techniques and styles,

4.4 Terrarium – conceptual meaning, creating terrarium

4.5 Décor and Adornment- Water features, sculpture, tree hangers, pottery lighting, swings, hammocks.

**4.6** Supportive- Bird houses, kennel house, beehives, feeders, tree houses, trellises.

4.7 Eco friendly materials role in raising garden

### **Unit V Commercial Landscape Gardening**

5.1 Drafting landscape plans incorporating all components

5.2 Landscape gardening in educational institutions, corporate and residential areas

5.3 Prospects for entrepreneurship –Running nursery, making eco friendly bags/baskets,

Other saleable products - plants (saplings, seedlings), cut flowers, value added products like flower arrangement, bouquet, readymade lawns, terrarium, real time (working model) indoor fountains etc

## **Practical**

1. Visit to landscape garden to identify different types of gardens
2. Visit nursery to familiarise with various ornamental plants
3. Make an album to depict the beauty principles, elements and components of garden layouts
4. Draw plans for various types of garden
5. Demonstration on creating terrarium and bonsai
6. Hands-on experience on xeriscape garden
7. Workshops on flower arrangement – types and styles
8. Workshops on bouquet making, flower tying and garland making
9. Survey of florists, nursery owners and landscape garden professionals
10. Interview of Hotel/ Hospital/ Corporate people about gardens in their premises
11. Training by Landscape / horticulture/ floriculture professionals on significance, scope and methods of initiating ornamental gardens
12. Demonstration on the plant propagation methods by experts
13. Ready to use lawns as saleable products
14. Initiating a model nursery in the department and start a project enterprise
15. Making eco friendly grow bags and baskets and initiate micro level sales.

## **Learning Experiences**

- Experiential learning, Site visits, Field visits, Market survey, lecture cum demonstrations, workshops on making saleable products, model nursery

## **Evaluation**

- Class tests, examination, assignments and seminar presentation, interactions, conducting quizzes and debates, interviews, research projects and case study analysis, submission of reports, records and portfolio.



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**DISCIPLINE SPECIFIC ELECTIVE COURSE  
NON GOVERNMENT ORGANISATION MANAGEMENT  
(CREDITS: THEORY – 4, PRACTICAL – 2)**

**Course Description**

NGO Management is a course to train the aspirants for their career, working for the upliftment of the underprivileged and for those who spend most of their career, working in the areas like environment, health, education, social service and community development.

**Course Objectives**

- Develop and understanding of evolution, growth and development of Non-Government Organisations
- Learn the legal frame work for establishing NGO's
- Enhance skills and techniques of project evaluation / Resource Mobilization
- Acquire specific knowledge on project Management
- Learn the concept of team building, peoples participation and self-understanding

**Learning Outcomes**

- Explain the needs and importance of NGO's and Management
- Learn the legal framework for establishing NGO's
- Describe the concepts, principles of Project Management and Formulation of Detail Project Report
- Analyze the key issues in Government policies and programmes

**Course Content****Unit-I. Concept of NGO**

- 1.1 Meaning of NGO and GO
- 1.2 Difference between government organization(GO) and Non-government Organization (NGO)
- 1.3 Principles of NGO
- 1.4 Characteristics of good NGO
- 1.5 Structure and functions of NGO
- 1.6 Classification of NGO

## 1.7 Origin and development of NGO

### **Unit-II. Legal Frame Work for Establishing NGO**

- 2.1 Legal – rational structure of Non profits
- 2.2 Trust and Societies with special reference to Trust and Registration Acts
- 2.3 Foreign contributions and Regulation Act (FCRA)
- 2.4 Statutory obligations, Income Tax Exemption (80-G, 12-A and 35 NC)
- 2.5 Rules and Regulations – Resource Mobilization
- 2.6 Methods and Techniques of fund raising
- 2.7 International, national and local levels
- 2.8 Schemes for NGO's under various Ministries of Government of India
- 2.9 NABARD and Human Rights Commission

### **Unit-III. Project and Management in NGO**

- 3.1 Concept, objectives, principles and Types of projects
- 3.2 Project implementation and management
- 3.3 Project planning matrix, project cycle management, identification and formulation of Detail project Report (DPR) with reference to action AID
- 3.4 Monitoring and Evaluation – Network Analysis Programme (Project) Management and Review Techniques (PERT), Critical Path Method (CPM), Participatory Rural Appraisal (PRA) – Tools and Techniques, Strength, Weakness, Opportunity and Challenges (SWOC) analysis.

### **Unit-IV. NGO Management**

- 4.1 Organizational types and structures
- 4.2 Ngo management competencies
- 4.3 Team Building – concept and significance, Role of effective team building in management of NGO's
- 4.4 People's participation – concept, meaning and objectives, role of people's participation in community development.
- 4.5 Understanding Self – Formulation of Self-concept, Dimensions, Components
- 4.6 Self-Assessment : Analysis & Action plan

### **Unit-V. Policies and Programmes**

- 5.1 Government laws, partnership model, Governing Schemes through ministries /Department / Bodies, government grant-in-aid
- 5.2 New regulations for NGO and government control
- 5.3 National policy on voluntary sector under five year plans.

### **Practical**

- Visit an NGO and learn the aspect of formation, management and administration
- Carryout a case study on NGO's and understand the techniques of NGO's
- Preparation of model project report with reference to action AID
- Apply Network analysis and PRA techniques to find out the available resources in the target area of NGO
- Interaction with NGO's officials and findout their problems and prospects
- Interact with NOGs officials and how the Government policies and programmes (NGO's)

### **Leaning Experiences**

- Regular lectures, debates, field visits, ICT enabled learning experiences

### **Evaluation**

- Class tests, assignments records, reports and seminars

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**DISCIPLINE SPECIFIC ELECTIVE COURSE  
EXTENSION MANAGEMENT  
(CREDITS: THEORY-4, PRACTICAL-2)**

**Course Description**

Extension Management creates awareness amongst the students to make them participate in various programmes and attainment of organizational goals and objectives with and through other people. It further explores the influence of various issues for the success of its programmes.

**Learning Objectives**

- Develop an understanding about the meaning, functions and characteristics of Extension Management
- Learn the requirements and Levels of planning
- Learn the key issues in controlling
- Understand the functions of organizational Management

**Learning Outcomes**

- Understand the concept related to Extension Management
- Comprehend the purpose of planning and organizing
- Focus on requirement of effective staffing for successful Management
- Analyse the significance of effective controlling

**Course Content****Unit-I. Extension Management**

- Meaning, function, basic elements , characteristics of extension management
- Concept, need, nature, objectives and functions of extension
- Informal, formal and non-formal education and differences between formal and extension education

**Unit-II. Planning**

- Definition, requirement of effective planning, levels of planning, elements of planning, contingency planning

### **Unit-III. Organizing**

- Definition, requirements of effective organizing, line and staff function
- Span of management, scalar principle, delegation of authority, use of committee, coordination, involvement of organizations at the local level input management, common mistakes in organization

### **Unit-IV. Staffing**

- Definition, requirements of effective staffing , training for professional development, training strategy
- Training Methods – lecture, group discussion, seminar, panel discussion, colloquium, symposium, workshop, syndicate method, case study role playing, brain storming, buzzy session, sensitivity training, interactive video, video conferencing, performance appraisal, stress in managing, organizational conflict, grievances in organizations.

### **Unit-V. Controlling**

- Definition, requirements of effective controlling, monitoring and evaluation, supervision, budgeting and auditing, reporting
- Change agent success, change agent problems a study in organizational management, reaching the weaker sections, administration of rural credit

### **Practical**

1. Visit to an organization and understand the requirements of effective staffing.
2. Interact with the staff organization and understand their functions.
3. Carryout a case study on successful management of panchayat.
4. Select a topic related to women and issue faced by them and describe ways to assess them.
5. Identify the change agent problems and suggest ways to solve the same.
6. Identify the ways to handle the grievances.

### **Learning Experience**

- Lectures, demonstration, group discussion, case study, role plays, ICT enabled learning experiences.

### **Evaluation**

- Class tests, assignments, seminar, records, reports.

## **References**

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- Basu, C.R. (1989). Organisation and Management. New Delhi:Schandand Co Ltd.
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## **DISCIPLINE SPECIFIC ELECTIVE COURSE COMMUNICATION FOR DEVELOPMENT (CREDITS: THEORY-4, PRACTICAL-2)**

### **Course Discipline**

Course in Communication for Development orients the students to learn about the various dimensions of development and communication for social change. The course focuses contemporary development concerns, advocacy and communication for sustainable social change. It enhances the capacity of the students in participatory methodologies and innovative communication techniques.

### **Learning Objectives**

- Understand the concept and process of development
- Gain knowledge on development communication
- Learn the importance media in development communication
- Acquire skills on Information Education and Communication (IEC) technologies and media

### **Learning Outcomes**

- Understand the concept related to communication for development
- Comprehend the significant development communication
- Focus on different types of media and its uses in the implementation of programme
- Analyze the ICT in development communication
- Understand the steps in message design

### **Course Content**

#### **Unit-I. Development Communication**

- 1.1 Definition, basic concept, nature, significance and functions and dysfunctions, dynamics of development.
- 1.2 Models of Development- Dominant paradigm, Basic Needs model, new paradigm of development.
- 1.3 Philosophy of and principles of development communication.
- 1.4 Methods of Communication.

**Unit-II. Approaches to Development Communication**

- 2.1 Meaning, nature, role and characteristics of development communication
- 2.2 Interrelationship between development and development communication
- 2.3 Diffusion / extension approach, Mass media approach, development support communication approach, institution approach, integrated approach and localized approach
- 2.4 Paradigm of development communication

**Unit-III. Media and Development Communication**

- 3.1 Traditional media – types, characteristic role in development communication
- 3.2 Development reporting – roles and responsibilities of development reporter, ethics in reporting, required skills and issues in development reporting
- 3.3 News reporting – definition of news, ingredients and qualities of news, news value, types of news reports, structure of news reports
- 3.4 Radio news, features and commentaries, radio and development communication
- 3.5 Television and cinema – role in development communication
- 3.6 ICTS – scope in development communication

**Unit-IV. Skills for Development Communication**

- 4.1 Photography - basic principles, preplanning, scripting, shooting, developing, mounting, recording of commentary or dialogue, synchronization of frame with recording
- 4.2 Video films – essential preliminaries, preplanning – procedure, classification of video programmes, shooting script
- 4.3 Editing procedure – optical effects, music titles and other accessories to be added
- 4.4 Recording process, Home videos, radio recording

**Unit-V. Social marketing and advertising**

- 5.1 Social marketing – concept of social marketing
- 5.2 Innovative strategies in Social marketing
- 5.3 Advertising – definition, types, origin and role
- 5.4 Types of advertisement and their impacts

5.5 Media for advertising

5.6 Media planning and advertising

### **Practical**

1. Analyse the models and its application in the implementation of programmes
2. Apply the traditional media and understand the effectiveness of the same in women's issues
3. Identify various issues in development communication through radio scripts, newspaper stories and reports
4. Carryout cases studies on successful implementation of communication programmes by using communication skill
5. Interact with media in organizing programmes on current issues
6. Apply the approaches of social advertising to create awareness on important issues related to women

### **Learning Experience**

- Lectures, demonstration, Group discussion, Case study, role play, Application of ICT in teaching learning process.

### **Evaluation**

- Class tests, assignments, project work, records and reports.

### **Reference**

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- Communication for Development in the Third World Theory and Practices (1991). New Delhi: Sage Publications
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**DISCIPLINE SPECIFIC ELECTIVE COURSE  
COMMUNITY DEVELOPMENT  
(CREDITS: THEORY-4, PRACTICAL-2)**

**Course Description**

Community development refers to the broad set of skills and institutions that local communities utilize in an effort to improve the quality of life for all residents. This Course examines the history of housing, economic trends and social policies that have affected the marginalized communities across the country and project the organizing and capacity building measures that community development professionals and activists have sought to improve these conditions.

**Learning Objectives**

- Understand the conceptual meaning of community development and community organization
- Become aware of community development approaches
- Study community organization modalities in various settings
- Learn to evaluate of community development programmes

**Learning Outcomes**

- Distinguish community development from community organization
- Comprehend significant phases in community development
- Gain knowledge on sustainability and community development concepts
- Envisage the role of community-based organizations in community development

**Course Content****Unit-I. Concept of Community Development**

- 1.1 Meaning and Definition of community development
- 1.2 Principles, Philosophy and objectives
- 1.3 Elements of community development -Community development as a process, community development as a method, community development as a programme, community development as a movement

1.4 Rural development initiatives prior to independence and post-independence

## **Unit-II. Role of Community Based Organizations**

2.1 Conceptual meaning and definition of community based organizations

2.2 Role, structure and functions of community organizations

2.3 Models of community based organizations

2.4 Approaches of community based organizations

## **Unit-III. Phases of Community Development**

3.1 Phases of community development – definition and needs

3.2 Seven Phases of community development: sequence and exclusive roles

- Relationship
- Assessment
- Discussion
- Organization
- Reflection
- Modification
- Continuation

3.3 Personnel involved in community development activities – qualities and role

3.4 National Extension Service – Role of student volunteers in community development

## **Unit-IV. Evaluation of community development programmes**

4.1 Review of community development programmes

4.2 Evaluation methods

4.3 Analysis /merits and demerits

4.4 Community involvement and assay of Benefits

4.5 Incentives and Prizes/ Awards

## **Unit-V. Sustainability and Community Development**

5.1 Concept of sustainable community development

5.2 SDGs – Sustainable Development Goals – concept

5.3 Significance of SDGs to community development

5.4 Need for sustainable community development

## 5.5 Sustainability in community development- aims, objectives and principles

### **Practical**

1. Assessment of selected community development programmes
2. Visit to Award won Panchayats to understand their success story
3. Visit to villages to observe community activities
4. Prepare a document on community development activities in a model village
5. Preparation of plan of work
6. Organize community development programmes in a selected rural area
7. Follow up and evaluation of the programmes in progress

### **Learning Experience**

- Lectures, discussion, field visit, ICT enabled teaching, project work

### **Evaluation**

- Class tests, assignments, conduct of programmes in the field, records and reports

### **References**

- Banta Sharma Nidaugmayum (2015). Community organization and social registration. New Delhi: Janadaprasakashan
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## **8.3 SKILL ENHANCEMENT COURSES**



**SKILL ENHANCEMENT COURSE**  
**Surface Ornamentation**  
**(Credits: Theory - 0, Practical - 4)**

**Course Description**

Surface ornamentation lends the much needed embellishment into the garments making a drab and dull garment into something interesting. India has a rich tradition of surface ornamentation works that are applied on textiles. This course deals with different methods and materials used for surface ornamentation. Further it induces exploration for different combinations to produce creative surface on textiles. This course will enhance students' creativity by training them to use various materials and stitches. It offers ample opportunity to students to create, experiment and innovate with materials.

**Learning Objectives:**

- Impart knowledge to the students about different techniques of surface ornamentation
- Enable the students to make diversified products by using these techniques.
- Introduce students to varied embroideries of India, painting and printing on textiles.
- Develop skills to express their creativity through various methods of surface ornamentation.
- Understand, develop and communicate ideas and information.

**Learning Outcomes:**

A successful completion of this course will enable students to

- Identify and use embroidery tools following safety precautions.
- Meticulous use stitches and trimmings
- Translate design ideas onto fabric.
- Use the Indian Embroidery, painting and printing for developing products
- Access, analyse, evaluate and use information from a variety of sources, work collaboratively with others to achieve individual and collective goals.
- Confidence in developing their own designs.

**Unit I Introduction****1.1 Value addition to Textiles**

- a.** Embroidery, Trimmings and decorations, Painting and Printing, Applique, Patch & Quilting.

## 1.2 Essentials of Surface ornamentation

- a. Materials, tools, design enlargement and reduction, design placement and transfer Care of Surface embellished articles.

## **Unit II Embroidery**

### 2.1 Understanding embroidery techniques and preparation of samples:

- a. Hand Embroidery
- b. Machine embroidery

### 2.2 Raised embroidery with

- a. Net
- b. Sheer fabric.

### 2.3 Product development

- a. Home decor Items with Machine Embroidery (minimum two)
- b. Accessories with Hand Embroidery (minimum two)

## **Unit III Ornamentation with colours**

### 3.1 Garment restyling with Fabric Painting

### 3.2 Printing on Table Cloth/Stole

### 3.3 Creating textures with paint, block and stencil printing on fabric

## **Unit IV Decorative trimmings**

### 4.1 Ari work with bead, sequin, mirror.

### 4.2 Zardosi border

### 4.3 Trims and other decorative items :shells, beads, stones, buttons, cords

### 4.4 Other techniques: Layering. Patch work, cording, weaving, draw thread

## **Unit VI Ornamentation with fabric discards**

### 5.1 Patch worked Mask

### 5.2 Quilted Pouch /Bag

### 5.3 Smocked Yoke/ Sleeve

### 5.4 Any novelty item

**Project:** Product development based on the techniques explored in the class.

1. Selection of theme
2. Development of mood board

### 3. Conceptualization

Creation of fabric styling samples as per the selected theme and execution of the final selected design for the selected apparel style

## **Learning Experiences**

- Regular lectures, Videos, Presentations, Hands on experience for embroidery, printing, paintings, creating surfaces using variety of materials, Demonstrations

## **Evaluation**

- Class test, presentations, practical evaluations and project

## **Reference**

- Abling, B., (2006), Marker rendering for fashion, accessories and home fashions, Fairchild publications, New York.
- Abling, B., (2003), The Fairchild Encyclopedia of fashion accessories, Fairchild publications, New York.
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- Hideaki, C., (1992), Colour Harmony-a guide to creative colour combinations, Rockport publishers, London.
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- Shenai, V.A. (1981), History of Textile Design. Sevak Publication, Mumbai.
- Skull J., (1988), Key terms in art craft and design, Elbrook press, Australia.

## **SKILL ENHANCEMENT COURSE**

### **CAD in Textiles and Apparel**

#### **(Credits: Theory - 0, Practical - 4)**

#### **Course Description**

CAD knowledge helps in imaging and perceiving imaginative designs in final form without producing any prototype. This course will introduce computer aided design (CAD) software and computer aided manufacturing (CAM) systems to the students. The technologies to assist in the creation, modification, analysis and optimization of a design has been covered. This can increase the productivity of the designers and improve the quality of their visualized designs and provide them with essential skills for integrating technology with creativity.

#### **Learning Objectives:**

- Introduce Adobe Photoshop and Adobe illustrator software.
- Develops insights into the benefits of incorporating technology with creativity, by using advanced designing software.
- Acquaint with basics of computer aided pattern making and creating grading and markup plans.
- Develop specific skills sets that provide a strong foundation of fashion designing while understanding and incorporating all the aspects of digital production workflow.

#### **Learning Outcomes:**

A successful completion of this course will enable students to

- Apply Adobe Photoshop and Adobe illustrator software.
- Describes the basics of computer
- Explains and relates the benefits of incorporating technology with creativity.
- Compose design using different aspects of digital production workflow

#### **Course content**

##### **Unit I Basics of Computer**

- 1.1 Introduction to Vector and Raster graphics
- 1.2 Understanding the colour models
- 1.3 Understanding the interface and various tools of selected software

**Unit II Introduction to CAD software**

- 2.1 Drawing tools and functions
- 2.2 Corel draw
- 2.3 Photoshop
- 2.4 Illustrator
- 2.5 Creating motifs for print and embroidery designs for fabrics.
- 2.6 Creating a label and logo for design house.

**Unit III CAM technologies (integration of CAD)**

- 3.1 Creating designs for embroidery, dyeing and printing
- 3.2 Plain weave, Twill weave and satin weave simulations using weave design software
- 3.3 Dobby and Jacquard pattern using pixloom/weavelt Pro

**Unit IV Using CAD technology for Patternmaking**

- 4.1 Basic Bodice Block
- 4.2 Princess Bodice
- 4.3 Yoke Bodice
- 4.4 Basic Sleeves
- 4.5 Basic Skirt Block
- 4.6 Basic Pant Block
- 4.7 Grading of Patterns

**Unit V Project**

- 5.1 Design a female garment, male garment and kids wear from the categories given below and also evaluate the cost.
  - a. Female garment categories Formal Wear/ Ethnic Wear/Casual Wear
  - b. Male garment categories Formal Wear/ Ethnic Wear/Casual
  - c. Kids wear categories Formal Wear/ Ethnic Wear/Casual Wear

**Learning Experiences**

- Working with software, lecture cum demonstration, and comparison between real and virtual samples.

## Evaluation

- Project portfolio of a complete collection with costing and accounting/assignment/practical test

## Reference

- Burke.Sandra, 2006, Fashion Computing: Design Techniques and CAD, Burke Publishing U.K
- Centner M. and Vereker F. (2011), Fashion Designers Handbook for Adobe Illustrator, Second Edition, A John Wiley & Sons, Ltd, Publication, United Kingdom.
- Duggal, V., (2000). Cadd Primer: A General Guide to Computer Aided Design and Drafting-Cadd, CAD. Mailmax Pub. ISBN978-0962916595.
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- Grazia, (2018), CAD High computer technology for apparel manufacture. URL:<http://www.saprgrazia.com>
- Hume.Robert, 2016, Fashion and Textile Design with Photoshop and Illustrator:Professional Creative Practice, Fairchild Books, U.K.
- IynetOndogan. (2006), The Comparison of the Manual and CAD Systems for Pattern Making, Grading and Marker Making Processes. Cetin Erdogan in Fibers and Textiles in Eastern Europe.
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- Stewart-Smith, 2013,CAD for Fashion Design and Merchandising, Bloomsbury Publishing India Private Limited

**SKILL ENHANCEMENT HD**  
**Life Skills Education**  
**(Credits: Theory - 0, Practical - 4)**  
**Course Description**

The course introduces students to the concepts of life skills as well as life skills education. It explains the vital life skills and its importance for promoting wellbeing and competence, especially among emerging adults and youth. It prepares students to develop and implement effective life skills education curriculum keeping developmental and cultural needs of the learners at the core. It focuses on communication and other strategies crucial for successful implementation of life skills education.

### **Learning Objectives**

- Develop insight into life skills and its crucial role in coping with challenges and improving quality of life.
- Comprehend the core life skills and learn strategies to develop these skills in self as well as others through life skills education.
- Learn the components, principles and skills to design and implement effective life skills education programme.

### **Learning Outcomes**

- Define life skills and describe different life skills as well as its relevance for emerging adults and youth in contemporary context.
- Explain importance of life skills education from individual, interpersonal, familial and societal perspectives.
- Demonstrate abilities to use participatory approach and effective communication strategies in implementing life skills education programme.
- Critically evaluate the content and implementation of life skills education programmes.
- Design age appropriate and culturally relevant life skills education curriculum and implementation modules.

## **Unit- 1 Concept and Meaning of Life Skills**

1.1 Definitions and concept of life skills and life skills education.

1.2 Importance of life skills for overall wellbeing and value of life skills education.

1.3 Core life skills: classification, concepts and strategies to enhance these skills .

## **Unit- II Principles and Components for Planning and Organizing Life Skills Programs**

2.1 Understanding life skills in relation to:

- a. group characteristics and needs,
- b. contextual specificities and cultural ideologies, including cultural practice that govern everyday life
- c. gender nuances that exist within the group.

2.2 Incorporating 10 important life skills recommended by WHO (self-awareness, empathy, critical thinking, creative thinking, decision making, problem solving, effective communication, interpersonal skills, coping with stress and coping with emotions) while preparing the Life Skills Education programmes/curriculum/modules while ensuring their age appropriateness and cultural and contextual relevance. Skills for self: critical thinking skills, decision making skills, interpersonal communication skills, coping with stress and emotions; self-management skills, ability for empathy and compassion.

## **Unit-III Challenges and Responses in Implementation of Life Skills Education**

3.1 Factors responsible for resistance and non-implementation of life skills education from families, schools and society at large

3.2 Strategies to successfully deal with challenges and advocating for need for life skills education

- a. (Successful models of life skills education in India as well as globally)

## **Unit -IV Importance of Communication in Imparting Life Skills Education**

4.1 Concept and importance of communication .

4.2 Effective communication strategies for impactful life skills education programme (effective listening, speaking, building and maintaining relationships, understanding group dynamics and functioning in groups, delegating responsibilities)

4.3 Communicating with the audience: receiving feedback, handling questions, etc.



## **Unit -V Core Approaches and Strategies to Implement Life Skills Programs**

- 5.1 Understanding and developing self-skills/potential: self-awareness, self-esteem self-confidence, creative thinking, interpersonal skills, etc.
- 5.2 Use of participatory techniques and methods: individual exercises, group activities, games etc.
- 5.3 Important aspects of developing skill specific or issue specific modules to be used by teachers and trainers.

### **Projects**

1. Design and development of a life skills module on a select topic.
2. Write a positive case study about a youth awardees/ youth achiever applying positive youth development model OR Design a community development program utilizing a Positive Youth Development Model.
3. Visit to schools or NGOs implementing life skills programmes.
4. Interview counselors, schoolteachers and other professionals working with emerging adults and youth to learn from their experiences about felt needs young people and their experiences of implementing life skills education.
5. Prepare a communication module for adolescents in a low-income context.

### **Learning Experiences**

- Regular lectures, class discussions, debates, exercises on observation and follow up discussion, case studies, films and documentaries

### **Evaluation**

- Presentations and one take home practical assignment.

### **References**

- Agochiya, D. (2010). *Life competencies for adolescents: Training manual for facilitators, teachers and parents*. New Delhi: Sage Publications.
- Agochiya, D. (2009). *Every Trainers Handbook (2<sup>nd</sup> Ed.)*. New Delhi: Sage Publications.
- Dupuy, K., Bezu, S., Knudsen, A. Halvorsen, S. (2018). *Life skills in non-formal contexts for adolescent girls in developing countries* (CMI Report), Centre for Universal Education at

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<https://www.unicef.org/india/sites/unicef.org.india/files/2020-02/Comprehensive-lifeskills-framework.pdf>
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<https://files.peacecorps.gov/library/M0098.pdf>

## **SKILL ENHANCEMENT COURSE**

### **Skills for Working with Children**

**(Credits: Theory - 0, Practical - 4)**

#### **Course Description**

The course is designed to provide students with a comprehensive understanding about child development and how the process of development can be enriched by designing developmentally and contextually appropriate programs. It will provide an understanding of the basic principles and skills for working with children. Students will be trained to demonstrate effective approaches for guiding children's growth and development. The course will enhance students' skills to employ a variety of teaching-learning approaches, methods and materials.

#### **Learning Objectives**

- Learn professional and personal skills for working with children.
- Promote a holistic approach to child development by understanding the value of various activities designed for the children.
- Become aware about the developmentally and culturally appropriate practices for working with children and understand the importance of stimulating environment and role of teacher in promoting learning in young children.
- Learn the alternative use of locally available indigenous material/ resources.
- Develop sensitivity to the socio-cultural contexts, including gender, while working with children.
- Learn effective ways to communicate and guide children.

#### **Learning Outcomes**

- Apply theories and concepts of child development in working with children.
- Plan developmentally and culturally appropriate programs for children.
- Demonstrate skills to effectively work with children.
- Implement effective methods and techniques to communicate with and guide children.
- Use locally available indigenous materials for developing teaching aids.

### **UNIT-I Conceptual Understanding of Child Development and**

## **Developmentally Appropriate Practices**

- 1.1 The child as a whole person: Highlights of key theories and concepts of child development
- 1.2 Overview of Developmentally Appropriate Practice:
  - Definition, meaning, and principles
  - Difference between developmentally appropriate vs. inappropriate practices
- 1.3 Interface between theoretical approaches and developmentally appropriate practices with reference to behavioural, psychoanalytical, learning, and ecological perspectives
- 1.4 Need and importance of building appropriate skills as adults and professionals to nurture overall development of a child

## **UNIT- II Creating Stimulating Environment for Holistic Development and Learning**

- 2.1 Principles of child development and learning - NAEYC
- 2.2 Developmentally Appropriate Environments – Physical Environment, Social/Emotional Environment, and Cognitive/Language Environment
- 2.3 Need and importance of Creativity, Music, Drama and Artistic experiences, Language and Literacy, Science, Mathematics and Social Studies for holistic child development.
- 2.4 Role of teacher in enriching children’s learning experiences across developmental domains.
- 2.5 Planning a developmentally and culturally appropriate program – components, strategies, use of material, knowledge of setting – urban, rural, homes, day care centers etc.
- 2.6 Developing various learning material for enhancing development of a child.

## **UNIT- III Skills for Working with Children and Young People**

- 3.1 Confidence, acceptance, risk taking, trust- building
- 3.2 Personal Skills: passionate attitude, authentic, creative, energetic, innovative and organized
- 3.3 Professional Skills - Knowledge base, theme teaching and integrated curriculum, respect children, families and the context, collaboration with other adults, time management, etc.
- 3.4 Communication Skills - Effective listening, perspective taking, encompassing observation and communication - Verbal and non-verbal communication
- Effective ways of communicating - Positive and non-violent communication
  - Helping young children talk about their experiences and express their feelings, promoting participation and eliciting their wishes and views
  - How to deal with questions, conflict and criticism, and communicating in groups

## **UNIT–IV Building Theoretical Foundations for Guiding Children’s Behavior and Development**

- 4.1 Need/scope and goals of guidance in contemporary context
- 4.2 Principles of guidance
- 4.3 Essentials of guidance - The physical environment and schedules, nurturing environment and becoming a nurturing adult
- 4.4 Various approaches in guiding children
- Importance of positive guidance
  - Affirmations, Negotiations, Setting limits, Modelling, Reinforcement
  - Culturally sensitive guidance

## **UNIT - V Skills for Guiding and Managing Problem Behavior**

- 5.1 Understanding and managing inappropriate and problem behaviors of a child
- Types and causes of problem behavior
  - Managing problem behavior – a stepwise process
  - Intervention with parents and care providers, referral and support services

## **Projects**

1. Workshop on creative expression on theme of creating “best out of waste” and display in the students’ corner
2. Critically review child’s activities and participation.
3. Develop a detailed activity plan of developmentally appropriate program
4. Preparation of various teaching aids –Art resources, storytelling material, worksheets, Music related resources etc.
5. Sharing of documentaries and videos on Indian folk music and Traditional Indian puppetry
6. Interviews with teachers and parents
7. Design a teaching module for teachers working with young children

### **Learning Experiences**

- Regular lectures, exercises on observation and follow up discussion, case studies, films and documentaries, Module and resource designing

### **Evaluation**

- Class test, presentation, and assignment

### **References**

1. Aggarwal, J. C. (2007). *Early childhood care and education: principles and practices*. New Delhi: Shipra.
2. Berk, L.E. (2017). *Child development* (9th ed.). New York: Pearson
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**SKILL ENHANCEMENT COURSE**  
**Techniques of Food Preservation**  
**(Credit: Theory 0 & Practical 4)**

**Course Description**

This course helps us to understand what is possible in the world of food preservation; then understanding the factors that cause food to deteriorate. Once you understand that, you proceed to study the different ways foods can be preserved from chemical treatments, to changing the environmental conditions (temperature, moisture content, etc.) Food preservation is something that should be understood by anyone who handles food; whether for their own use, or on a commercial basis.

**Learning Objectives:**

- To learn the principles behind the methods of preservations
- To understand the stages of cookery and chemical characteristics in the preservation of fruits and vegetables
- Able to formulate preserved food products
- Acquire skills to preserve different types of food items based on their perishability.

**Learning outcomes:**

- Know the principles of preservation behind the methods of preservation
- Understand the stages of sugar cookery, quality of pectin and acidity in the development of preserved food products
- Acquire skills to formulate food based products
- Explore the principles of preservation in fruits and vegetables based products
- Skills to prepare cereals and pulse based preserved products and develop new products with retention of quality.



## **Course Content**

### **Unit-I. Concept of Food Preservation**

- 1.1 Importance of Food Preservation,
- 1.2 Types of Food spoilage by Micro organisms and by Enzymes
- 1.3 Basic Principles of Food Preservation
- 1.4 Food preservatives- Use of Salt, Acid, Sugar, natural food preservatives and artificial preservatives
- 1.5 Starting a food preserving unit
- 1.6 Product Promotion strategies and marketing skills

### **Unit-II. Preparation of dehydrated products**

- 2.1 Methods of drying & dehydration , different types of driers , freeze drying- lyophilisation , packing & storage
- 2.2 Drying methods for theselected products -Rice, Sago, Wheat, Maida, Rice flakes, black gram dhal, green gram dhal, Horse gram dhal Roots and Tubers
- 2.3 General tips with drying foods
- 2.4 Preparation of salted, dehydrated, preserves (Traditional Indian varieties of chips, Papads, Khakharasetc and Masala Powders, onion, garlic, ginger powder etc )
- 2.5 Hands on experience :Dryingof vegetables- peas, potato, carrot, French beans, Reconstitution ofdried vegetables, Drying & preparation of powders- garlic, ginger, spices mix etc

### **Unit-III. Preservation by Using Sugar**

- 3.1 Role of Pectin in Preserved foods
- 3.2 Stages in Sugar Cookery
- 3.3 Sugar Concentrates – Principles of Gel Formation
- 3.4 Hands on Experience:Preparation of Jam, Jelly, Marmalades, Sauce and Squash
- 3.5 Preserves, Candied, Glazed, Crystallized Fruits, Toffee
- 3.6 Evaluation of pH, Acidity and pectin quality
- 3.7 Visit to Fruits and Vegetable processing industry

**Unit-IV. Preservation by Using Chemicals and Salts and Fermentation**

- 4.1 Preparation and Preservation of Fruit Juices, RTS
- 4.2 Pickling – Principles Involved and Types of Pickles
- 4.3 Chemical Preservatives – Definition, Role of Preservation
- 4.4 Permitted Preservatives, FSSAI guidelines
- 4.5 Foods fermented by Yeasts
- 4.6 Foods fermented by Bacteria
- 4.7 Common Fermented Foods, Wine and Cheese Making
- 4.8 Hands on experience: Pickle making
- 4.9 Visit to Commercial Pickle Manufacturing Food Industry and Wine industry

**Unit-V. Preservation by Advanced Preservation Technology**

- 5.1 Meaning and needs of freezing foods
- 5.2 Types of Freezing and managing freezers
- 5.3 Guidelines for types of frozen foods-Fruits, Vegetables, fish, meat and poultry
- 5.4 Smoking foods
- 5.5 Pasteurization and Sterilization
- 5.6 Food Irradiation
- 5.7 Vacuum Packing
- 5.8 Canning and Bottling
- 5.9 Food Packaging Materials for preserved food products
- 5.10 Hands on experience: Blanching of fruits & Vegetables
- 5.11 Visit to Food Industries

**Learning Experiences**

- Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICT enabled teaching and learning experiences in terms of video lessons and documentary film shows. Hands on experience in laboratory and in food industries

**Evaluation**

- Announced and unannounced class tests, seminars and assignments and Record works related to their Practical works.

**Reference**

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**SKILL ENHANCEMENT COURSE**  
**Bakery Science**  
**(Credits: Theory - 0, Practical - 4)**

**Course Description**

The students are imparted practical knowledge of preparing bakery related products; knowledge of the ingredients used and undertakes the costing part of it. Students also gain skills and knowledge in hygiene and faults and remedial measures, major and minor equipments used, setting up of a bakery unit. Maintenance making these programs a lucrative field of study.

**Learning Objectives:****Knowledge Based:**

- Identify and explain baking terms, ingredients, equipment and tools.
- Employ safe food handling practices using contemporary guidelines

**Skill Based:**

- Scale and measure ingredients.
- Prepare yeast dough, quick breads, pies, cookies, cakes, icing, pate choux, and savory baking.
- Produce baked products using commercial ingredients and equipment.

**Learning Outcomes:**

- Resize recipes to meet production needs and equipment capacities.
- Scale, mix, mold, proof and bake yeast raised goods.
- Prepare cookies using various common dividing and panning techniques.
- Prepare home style crumb topped and two crust pies.
- Prepare product finishes such as washes, glazes, icings, frostings and fillings.
- Demonstrate proper storage techniques for all baked products.
- To develop skills for setting up a bakery unit. And to enhance entrepreneurial skills in bakery and confectionery.

**Course Content****Unit-I. An overview of Bakery Industry**

- 1.1 Current status and growth rate of bakery industry
- 1.2 Economic importance in India.
- 1.3 Classification of Baked Foods, Product Types, Nutritional Quality and Safety of Products, Storage and Packaging Materials,
- 1.4 Basic baking principles
- 1.5 Ingredients uses- liquid and flours (cereals types and flour quality)
- 1.6 Guidelines to follow the standards & regulations.
- 1.7 Forming the dough.
- 1.8 Mixing and Gluten Development: Blending the ingredients, adding liquid to hydrate flour proteins , developing gluten
- 1.9 Processes that occur during Mixing-Air cell formation, Hydration, Gluten development
- 1.10 Controlling Gluten Development
- 1.11 Methods for Adjusting Gluten Development- Other Ingredients and Additives, Salt, milk
- 1.12 The Baking Process- Melting of fats, leavening, Formation and expansion of gases, Killing of yeast and microorganisms,
- 1.13 Bread formulation: quality of materials like flour, shortening, yeast, chemical leaveners, flour improvers, preparing bread formula on the basis of the role of ingredients
- 1.14 Bread processing: Flying ferment, calculating desired water temperature, mixing/ kneading, bulk fermentation (physical and chemical changes in proofing), knock back, dough make up (Scaling, rounding, intermediate proofing, molding, panning), Proofing and factors affecting proofing, Baking time and temperature, depanning, cooling, slicing
- 1.15 Introduction and organization of a Bakery Unit
- 1.16 Introduction and Organizational Structure of a bakery Unit
- 1.17 Planning, layout and equipments used in bakery Unit.
- 1.18 Hands on experience: Preparation of bread, bun

## **Unit-II. Preparation and Quality evaluation of Bread, Bun, and Pastries**

- 2.1 Role of ingredients and equipments used
- 2.2 Bread making process –Household Vs. Commercial
- 2.3 Variety of breads, bun, and Pastries

- 2.4 Product quality characteristics of Bread, Bun and pastries
- 2.5 Sensory evaluation of Bread, Bun and pastries
- 2.6 Hands on experience: Sensory evaluation of prepared bread & Bun

### **Unit-III. Preparation and quality evaluation of cakes, Cake Decoration and Modified Bakery Products**

- 3.1 Role of Ingredients,
- 3.2 Cake mixing methods,
- 3.3 Types of cakes-Butter Cake, Sponge Cake and Eggless Cake
- 3.4 Hands on experience: Preparation and evaluation of cakes
- 3.5 Cake judging, Faults and remedies
- 3.6 Different types and techniques of Cake Decoration -icings and fillings.
- 3.7 Hands on experience: Modified baked products - high fiber, low / alternate sugar, low fat, gluten free, and millet based bakery products for special nutritional requirements.

### **Unit-IV. Preparation and quality evaluation of Biscuits, Cookies Macaroons and Muffins**

- 4.1 Role of ingredients,
- 4.2 Methods, types and techniques, equipments used for the preparation of Biscuits, Cookies macaroons and muffins
- 4.3 Product quality, characteristics, faults and corrective measures of Cookies, biscuits, macaroons and muffins
- 4.4 Hands on experience: Preparation & evaluation of Biscuits/Cookies/Muffins

### **Unit-V. Preparation and quality evaluation of Home Made Chocolates and Pies**

- 5.1 Principles of sugar cookery
- 5.2 Processing of Cocoa and Chocolate
- 5.3 Role of ingredients and Processing methods,

5.4 Equipments Used, Product Development – Quality Characteristics, Sensory Evaluation of Products;

5.5 Types – Hard – Boiled Candies, Crystalline and Non-Crystalline Candies, Toffees, Fruit Drops, Chocolates, Chocolate Chips, Fruit Pie, Apple Pie, Fudge, Fondant, Marsh Mellow, Chewing Gum, Jellies and Confectionaries

5.6 Hands on experience: Preparation of Homemade chocolates

### **Learning Experiences**

- Regular lectures, demonstrations, Exercises on observation and follow up with group discussions, case studies, ICT enabled teaching and learning experiences in terms of video lessons and documentary film shows.

### **Evaluation**

- Announced and unannounced class tests, seminars and assignments and Record works related to their Practical and hands on training in the bakery units.

### **Reference**

- Dubey, S.C. (2017). *Basic Baking*, 5<sup>th</sup> Edition, ChanakyaMudrakPvt. Ltd., New Delhi.
- Rainact, AL. (2013). *Basic Food Preparation – Complete Manual*, 3<sup>rd</sup> Edition, Orient Longman Pvt Ltd., Mumbai
- Manay, S &Shanaksharaswami, M. (2014). *Foods : Facts and Principles*, New Age Publishers, New Delhi
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**SKILL ENHANCEMENT COURSE**  
**Computer Aided Interior Designing**  
**(Credits: Theory - 0, Practical - 4)**

**Course Description**

The course disseminate knowledge about the drawing tools in the use of 2 D drawings and the Isometric drawings by using Auto Cad software for designing Interiors . It also introduces the basics and the key elements of 3 D drawings for Interiors. The course also focuses on developing skills to prepare computerized drawings as a professional Interior designer.

**Learning Objectives**

- Gain knowledge about the fundamental concepts in designing Interiors by using Auto Cad software.
- Learn the use of drawing commands and tools needed in computerized designing.
- Develop skills to use AutoCAD as a 2-Dimensional Drafting Tool and Isometric drawings for Interiors designing.
- Get practically oriented with the 3 D drawing in designing Interior.

**Learning Outcomes**

- Understand the functioning of the drawing commands and tools in Auto Cad Software for the computerized drawing in designing Interiors.
- Acquire skills in drafting 2 D and Isometric Interior drawings to pursue vocation in the field.
- Become familiar with the 3 D drawings.
- Develop confidence in drafting computerized drawings related to Interior objects, furniture and Interior plans.

**Course Content****UNITI: Fundamentals Concepts in Designing Interiors on Computer**

- 1.1 Understanding Computers
- 1.2 Introduction to Auto CAD
- 1.3 Auto CAD graphic WINDOW
  - i. Using commands



ii. Use of Shortcut Methods in Drawing

- a) Short cut keys (F1 to F9)
- b) Short cut drawing commands

## **UNIT II: SETTING UP A DRAWING**

### 1.1 Tools in AutoCAD

- **Drawing Units:** Linear and Angular units :Line, Ray, Construction line, Multi line, Revision Cloud , Polyline, 3 D Polyline ,Rectangular Arc, Polygon, Circle, Donut, Spline, Ellipse, Point, Region and Wipe out.
- **Edit Toolbar (Modify) :**Erase copy, Mirror, Offset, Array, Move, Rotate, Scale, Stretch, Lengthen, Trim, Extend, Break, Join, Chamfer, Fillet and Explode.
- **Drawing Size:** The Grid, drawing Limits, drawing with Grid and Snap.
- **Layers :**Setting up a new layer, assigning a colour to a layer, making a layer current , making layers visible or invisible, line types, loading a line type, line types by layer and object ,moving object to different layers.
- **Blocks:** Meaning, Blocks and Layers, making of a Block, inserting a Block, using Block in drawing.
- **Hatching:** a) Opening of a boundary hatch and fill dialogue box: selecting a hatch pattern, hatch pattern palette, hatching and drawing, modify the hatch pattern, final application of hatch,  
b) Use of advanced command: selecting the advanced option, application of the advanced option  
c) Use of Gradient: Choosing single color option and double color option, application of the selected option.
- **Text:** Using Single and Multi line Text and Editing Text
- **Dimension:**Styles, Tool bars, Linear, Aligned, Radius and diameter, Continue, Baseline, Angular dimensioning and Editing dimensioning.

## **UNIT I11: Isometric Drawings**

- 3.1 Setting Up the Isometric mode
- 3.2 An Isometric Plan
- 3.3 Drawing an Iso-Circle Isometric Drawing

### 3.4 Text on Isometric Drawing

## **UNIT IV: Designing using AutoCAD**

- 4.1 Furniture
- 4.2 Interior related objects
- 4.3 Floorplan/Layouts and Elevations

## **UNIT V: 3-D Drawing in AutoCAD**

- 5.1 Introduction to 3-D Drawings in AutoCAD
- 5.2 Creating 3-D Drawings:
- 5.3 3-D Surfaces
- 5.4 Rendering

## **Learning Experiences**

- By way of Demonstrations, Workshop, Expert Lectures, Practical guidance, Power point presentations, Videos.

## **Evaluation**

- Weekly and Monthly regular Practical class test, record submission , assignments, project work, daily practical work

## **References**

- Omura G. & Benton C. B. (2018). *Mastering Autocad 2019 &AutoCad LT 2019*. Sibex-A Wiley Brand.
- Whelan, P. (2006), *Auto CAD*, New Delhi, Dream Tech Press.
- Shrock, Cherlfi, R. (2006), *Exercise work book for beginning Auto CAD 2006*, New Delhi.New, Age International Publishers.
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**SKILL ENHANCEMENT COURSE**  
**Art of Enterprising**  
**(Credits: Theory 0 & Practical 4)**

**Course Description**

The Course lays a platform for students to get to know the commercial activities happening around them and their impacts on consumer behavior. It offers prospects for gaining knowledge on how they can contribute to the field of commercial art and enterprising provisions.

**Learning Objectives**

- Understand the concepts of commercial art and enterprises
- Drafting plans for commercial and corporate spaces
- Learn rudiments of visual merchandising
- Appreciate role of function and aesthetics in arranging commercial spaces

**Learning Outcomes**

- Comprehension on the differences between merchandise display and window display
- Internalize art of selling and gain stimulus to start enterprises in Commercial art and display
- Learn interior / exterior display techniques and
- Practical exposure to non-store merchandising methods

**Course Content****Unit I Art of Selling and Retailing**

- 1.1 Introduction to selling and retailing
- 1.2 Art of selling methods- displays, products and marketing
- 1.3 Types of store Layouts- Grid layout, Forced-path layout, Free-form layout, Boutique layout, Combined layout, Store layout-- general arrangement, principles and factors
- 1.4 Design of display units – visits to furniture designers
- 1.5 Design of boutiques and showrooms – field visits
- 1.6 Reports and feedback on visits
- 1.7 Drafting plans for different store layouts

## **Unit II Visual Merchandising**

- 2.1 Meaning and definition, significance of display
- 2.2 Initiation to store exterior concepts - store signs, facade; banners planters and awnings, elements of display
- 2.3 Introduction to store interiors - windows, highpoints, focal points, nesting tables, staircase landings, step raisers, lift area, pennants/danglers, cash counters, space on hire like pillars and entrances
- 2.4 Exposure to Product display - Exhibition spaces – display for exhibition; Lighting design for commercial spaces task/display/atmospheric/focal lighting
- 2.5 Model making workshops –making store interior and exterior display materials

## **Unit III Window Display**

- 3.1 Meaning and definition, concept and objectives
- 3.2 Display techniques - windows, highpoints, focal points, nesting tables, staircase landings, step raisers, lift area, pennants/danglers, cash counters
- 3.3 Awareness on spaces on hire like pillars and entrances
- 3.4 Purpose and importance of display, Rules of display planning
- 3.5 Area arrangement on display of art objects, exhibitions and window display of consumer goods
- 3.6 Model making on display tools

## **Unit IV Merchandise display**

- 4.1 Comprehension on types of merchandise
- 4.2 Merchandise display - exterior and interior, Merchandise presentation strategies,
- 4.3 Exposure to Seasonal displays and other techniques of merchandise placement in commercial enterprises
- 4.4 Useful display fixtures - Shelves, Gondolas, Round racks, Four ways, Saccades and fixation, Replenishes, Planogramming - Introduction and hands-on experience in creating display fixtures

## **Unit V Non-store Merchandising**

5.1 Introduction, objectives

5.2 Non-store retail merchandising methods

- Television retailing/home shopping
- Internet retailing/online shopping
- Catalogue management
- Product presentation in Non- store retail merchandising

5.3 Field visits to understand rudiments of sales promotion techniques

5.4 Graphic representations and Photography Exercises on creating Posters, Pamphlets, Booklets, catalogue, Portfolio, Montages

5.5 Exercises involving Logo design, collage, calligraphy and printing

### **Learning Experiences**

- Flipped classroom, ICT enabled teaching learning, field visits, industrial visits, visits to Exhibitions, museums, art galleries, malls and Showrooms, Invited lectures, demonstrations, workshops and hands-on experiences, internship and training

### **Evaluation**

- Class tests and assignments, submission of reports of visits, records, Albums, case studies, models, Area arrangements, mock displays, role play, preparing posters, pamphlets for Advertisements, mini project, montages

### **References**

- Ebster, C., and Garus, M. (2011). *Store Design and Visual Merchandising: Creating Store Space That Encourages Buying*. New Delhi :Business Expert Press
- Fernie, J., Fernie, S., Moore, C., and Fernie, A. (2003). *Principles of Retailing*. London:
- Gormann, G. M. (1996). *Visual Merchandising and Store Design Workbook*. New York: St Books; Workbook edition
- Jodidio, P. (2010). *Shopping Architecture Now!*Taschen,
- Kazmi, S. H. H., and Batra, S. K. (2008). *Advertising and Sales Promotion*. New Delhi: Excel Books

- Kubba, S. (2003). *Space Planning for Commercial and Residential Interiors*. (1<sup>st</sup> Ed.). New Delhi: McGraw-Hill Professional,
- Morgan, T. (2010). *Window Display: New Visual Merchandising*. New York: Laurence King Publishing
- Nair, R. (2002). *Marketing*. New Delhi: Sultan Chand and Sons Publishers.
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- Uffelen, V. C. (2008). *Malls & Department Stores*. (2<sup>nd</sup> Ed.). New York: Braun Publishers
- Wells, W. D., Moriarty. S and Burnett, J. (2005). *Advertising: Principles and Practice*,(7th Ed.).New Delhi: Prentice Hall Publishers

**SKILL ENHANCEMENT COURSE  
ENTREPRENEURSHIP MANAGEMENT  
(CREDITS: THEORY- 0, PRACTICAL-4)**

**Course Description**

Entrepreneurs are innovators who help improve technology, products and society. For the economic growth of any country, the contribution of manufacturing and service sector play an important role. The purpose of exposing students to entrepreneurship is to motivate them to look at entrepreneurship as a viable and preferred career and emerge as job givers.

**Learning Objectives**

- Initiate entrepreneurial motive and impart skills and capabilities for entrepreneurship
- Comprehend nuances of entrepreneurship
- Gain knowledge on Governmental plans and programs
- Ignite / kindle aspirations to become entrepreneurs and successful managers

**Learning Outcomes**

- Understand the concept of entrepreneurship, entrepreneur and enterprise
- Identify ways to approach supportive Institutions and Banks for starting an enterprise
- Analyze the steps in product selection and form of ownership
- Focus on the formation of project proposal and practice effective accounting processes

**Course Content****Unit-I. Concept of Entrepreneurship**

- 1.1 Conceptual - meaning, definition and scope of entrepreneurship
- 1.2 Entrepreneur- meaning, qualities, functions and types of entrepreneur
- 1.3 Enterprise – Definition, nature and classification
- 1.4 Forms of Organization – Sole proprietorship, partnership, Joint Stock Company
- 1.5 Role of entrepreneur in economic development
- 1.6 Visit to enterprises to observe the qualities of entrepreneurs

**Unit-II. Establishing a Small Scale Enterprise**

- 2.1 Concept and Classification – Product identification and product selection
- 2.2 Infrastructure – Plant Location, Land, building, water and power
- 2.3 6MS – Man power, method, machine, material, marketing, mother nature
- 2.4 Preparation of case studies of successful entrepreneur

### **Unit-III. Institutional Support**

- 3.1 Commercial Bank
- 3.2 Central level
  - SSIB – Small scale Industries Board
  - NSIC – National Small Industries Corporation
  - SIDO – Small Industries Development Organization
  - KVIC – Khadi and Village Industries Commission
  - NIESBUD – National Institute for Entrepreneurship and Small Business Development
  - NABARD – National Bank for Agricultural and Rural Development
- 3.3 State Level
  - DIC – District Industrial Center
  - SFC – State Finance Corporations
  - SSIDC – State Industrial Development Corporation
  - SIDBI – Small Scale Industrial Development of India
  - SISI – Small Industries Service Institutes
  - ICICI – Industrial Credit Investment Corporation of India
- 3.4 Visit to financial and supportive Institution to understand or observe their action modalities
- 3.5 Lectures on the rules and regulation for financial support to entrepreneurs

### **Unit-IV. Project Formulation**



- 4.1 Meaning and definition of project
- 4.2 Project formulation techniques – Quantifiable and Non quantifiable projects, Sectoral project, Techno economic project
- 4.3 Project report and preparation of project report
- 4.4 Project appraisal – market feasibility, technical feasibility, financial and economic feasibility
- 4.5 Carryout market survey

## **Unit-V. Accounting for Small Enterprises**

- 5.1 Meaning, need and objectives of accounting
- 5.2 Process of Accounting, Book Keeping, Journal, Ledger and Balance Sheet, Final Accounts
- 5.3 Auditing – nature and types
- 5.4 Preparation of model project, proposal and report

### **Learning Experiences**

- Lectures, discussion, industrial visit, ICT enabled teaching, project work

### **Evaluation**

- Class tests, assignments, records and reports

### **References**

- Anilkumar, S. Poornima S.C. Mini K. Abraham and Jayashree, K. (2012). Entrepreneurship Development. New Delhi: New Age International Pvt. Ltd., Publishers
- Badi, R. V. and Badi N. V. (2011), Entrepreneurship. New Delhi: Vrinda Publications Pvt. Limited
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- Robert, N.A. Hawkins, F. Kernelt, A. (2009). Accounting. New Delhi: Tata Me Graw – Hill Publishing Company Limited
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**SKILL ENHANCEMENT COURSE  
TRAINING AND PROFESSIONAL DEVELOPMENT  
(CREDITS: THEORY-0, PRACTICAL -4)**

**Course Description**

In the course of training and Programme Development, training is the process of teaching, informing, or educating people are well explained.

**Learning Objectives**

- Gain knowledge on training and professional development
- Apply the training skills for professional development
- Organize the training programme for professional development at community level
- Learn the various training approach for effective professional development

**Learning Outcomes**

- Gain basic knowledge on types and techniques of training for professional development
- Develop the skill on designing a training programme
- Conduct on campus or off campus training programme
- Use techniques like team building , group discussion and brain storming for professional development

**Course Content****Unit-I. Learning Theories**

- 1.1 Basic concepts of learning theories
- 1.2 Principles of learning, learning patterns, characteristics of learning process
- 1.3 Theories of learning- Behaviorism, Cognitivism, social learning theory, social constructivism, multiple intelligences, brain-based learning
- 1.4 Purpose of learning theories in training and professional development
- 1.5 Advantages and limitations
- 1.6 Interaction with trainees and training officials and find out the method and apply the same for professionals

**Unit-II. Training Approach**

- 2.1 Basic concept of training approach
- 2.2 Purpose of training approach
- 2.3 Types of training approach
- 2.4 Steps involved in training approach
- 2.5 Advantages and limitations
- 2.6 Preparation of training content and procedures (methods and materials)

**Unit-III. Types of Training**

- 3.1 Meaning of training for professional development
- 3.2 Purpose of training for professional development
- 3.3 Pre-service training
- 3.4 In service training and staff development
- 3.5 Evaluation and assessment of training
- 3.6 Detect and predict defects in the procedural design of a training activities

**Unit-IV. Phases of Training**

- 4.1 Planning Phase –Setting the goals and objectives of an organization, analyzing –the human resources, efficiency indices and organizational climate
- 4.2 Implementation Phase –publicity , develop training brochures, annual calendar of learning opportunities, time about their teaching plans
- 4.3 Evaluation Phase - reaction, behavior and result
- 4.4 Types of Evaluation – evaluation for planning, process of evaluation, terminal evaluation and impact evaluation
- 4.5 Key elements of the training activities are systematically monitored, problems are to be identified and attempts are to be made to rectify

**Unit-V. Designing training programme**

- 5.1 Gain attention

- 5.2 Inform learner and objectives
- 5.3 Stimulate recall of prior learning
- 5.4 Present stimulus material
- 5.5 Provide learner guidance
- 5.6 Elicit performance
- 5.7 Provide feedback
- 5.8 Assess performance
- 5.9 Enhance retention transfer
- 5.10 Interact with trainers and learn the practical requirements

### **Learning Experience**

- Lectures, Discussion, Field Visit, ICT Enabled Teaching, Project Work

### **Evaluation**

- Class tests, assignments, conduct of training programme, records and reports

### **References**

- Bahal, R., Swanson, B.E., and Farner, B.J. (1992). Human resources in agricultural extension: A worldwide analysis Indian Journal of Extension Education
- Dahama, O.P. (1979). Extension and rural welfare New Delhi: Ram Parsad and Sons
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## **9. KEYWORDS**

Apparel, Textiles, Design, Retail, Merchandising, Fashion, Fibers, Yarns, Fabrics, Clothing Construction, Sewing machines, Manmade fibers, Natural fibers, Polymers, Spinning, Costumes, Embroidery, Indian Traditional Textiles, Dyeing, Printing, Finishing, Laundry, Anthropometrics, Textile properties.

Resource, Management, Hospitality, Interior design, Ergonomics, Work simplification, Fatigue, Decision making, Sedentary, Life space, Proxemics, Hydroponics, Sustainable Development Goals, Pollution, Building Automation, Budget, Drudgery

Communication, Extension teaching, Extension Communication, Development communication, Traditional media, Programme planning, Plan, Planned change, Programme development cycle, Entrepreneurship, Entrepreneur, Small scale enterprise, Institutional support, Professional development, Volunteerism, Nonprofit, Participatory Rural Appraisal, Community development

Food Groups, Food Pyramid, Cooking Methods, Macronutrients, Micronutrients, Recommended Dietary Allowances (RDA), Recommended Daily Intake (RDI), Total Energy Requirement (TER), Basal Metabolic Rate (BMR), Moist heat methods , Dry heat methods, Combined (Moist and dry) Methods, Germination, Fermentation, Gelatinization, Dextrinization, Gluten formation, Immunity booster , Hypoglycemic and hypolipidemic properties, Fat Soluble Vitamins, Water Soluble Vitamins.

Human Development, Lifespan Development, Human Life Cycle, Childhood, Adolescence, Emerging Adulthood, Middle Adulthood, Old Age, Gerontology, Culture, Context, Sustainable Development Goals, Patriarchy, Gender, Family Systems, Romantic Relationships, Interpersonal Relationships, Developmental Disorders, Disability, Inclusion, ECCE, Play, Teacher Role, Values, Parenting, Socialization, Social Development, Community Development, Child Guidance, Counseling, Life Skills.