

**Program Educational Objectives (PEOs) for M.A.  
(Home Science) Programme**

<b>PEO1</b>	Promote innovation and research by instilling a sense of independent and critical thinking with sensitivity to social needs.
<b>PEO2</b>	Create a community of informed consumers of knowledge geared towards academic excellence and increase the knowledge base and skill sets aimed at enhancing their professional competence
<b>PEO3</b>	Imbibe a sense of social responsibility, constitutional spirit and democratic ethos through nurturing citizenship values and multicultural understanding among the students.
<b>PEO4</b>	Nurture professional skills, entrepreneurial skills, leadership and organizational skills while developing a sense of social responsibility.

**Programme Specific Outcome (PSOs) For M.A.  
(Home Science) Programme**

**Upon completion of Home Science Degree Programme, the graduates will be able to**

- PSO1:** Apply knowledge of biochemistry and physiology to human nutrient metabolism and use the Nutrition Care Process to make decisions, identify nutrition-related problems and determine and evaluate nutrition interventions
- PSO2:** Be efficient to nurture and take care of various age groups, to foster their healthy growth and development
- PSO3:** Be empowered to take judicious decisions concerning the use of materials and resources and display competency in effective communication skills and use of media
- PSO4:** Develop entrepreneurial skill towards start ups in fashion designing, tailoring unit, catering unit, nursery schools, family counseling centre, food processing centre and preservation units.
- PSO5:** Engage in promoting social justice, gender sensitization, human rights and environmental consciousness
- PSO6:** Gain theoretical and practical knowledge in research methodology and IT skills

## **Programme Outcome**

**Upon completion of Home Science Degree Programme, the graduates will be able to**

- PO1:** Understand and appreciate the role of interdisciplinary sciences in the development and well-being of individuals, families and communities
- PO2:** Develop professional skills in food, nutrition, textiles, housing, product making, communication technologies and human development
- PO3:** Effective Communication: Demonstrate proficiency in communicating competently in groups and organizations, competence in interpersonal communication
- PO4:** Acquire scientific skills in the management of resources and develop basic skills for career options in the fields of dietetics, interior designing, textiles and fashion designing
- PO5:** Environmental Consciousness: Discern the issues of environmental contexts and engages in promoting values
- PO6:** Understand the different role of women, Gender, sex and expose to debates, areas of interdisciplinary feminist research, and relevant methodologies
- PO7:** Integrate the indispensable human values to become respectful humans and law-abiding Citizens and understand Values of Women and importance of Women Rights
- PO8:** Understand current scenario of fashion and apparel design and adapt themselves to the changes in global fashion and commercial market.

**M.A. (Home Science)**  
**Home Science**  
**Course Outcomes**

Semester	Course Name	Course Outcomes
I <sup>st</sup>	Resource Management	<ol style="list-style-type: none"> <li>1. To enable the students to understand the money management and system at various levels in general and in certain specific industries or organizations.</li> <li>2. To help the students focus on and analyse the issues and strategies required to select and develop manpower resources</li> <li>3. To Enable the students to integrate the understanding of various management concepts along with the domain concept in order to take correct business decisions</li> </ol>
	Guidance and Counseling Across the Lifespan	<ol style="list-style-type: none"> <li>1. Students would gain the requisite competencies and skills for providing Guidance and counseling in varied spheres.</li> <li>2. Students would gain proficiency in undertaking and reporting of psychological disorders.</li> <li>3. Students would gain understanding of the applied and positive perspectives of Guidance and counseling.</li> <li>4. Students would gain knowledge about theoretical principles and practical processes in Guidance and Counseling and would be able to apply these in research and professional areas.</li> </ol>
	Fundamentals of Nutrition and Food Science	<ol style="list-style-type: none"> <li>1. Able to identify what foods are good sources for what nutrients. Students will be familiar with factors affecting for the absorption of nutrients</li> <li>2. Understand the functions and sources of nutrients, role of nutrients in maintenance of goof health.</li> <li>3. Gain knowledge regarding nutritive value cereals, pulses etc.</li> <li>4. Understand the basic principles of food preservation methods, including low temperature, heating, using chemicals and food irradiation</li> </ol>
	Development Communication	<ol style="list-style-type: none"> <li>1. Understanding different approaches to development, its problems and issues.</li> <li>2. Knowledge about communication models and its application.</li> <li>3. Critique the role of media in development communication..</li> </ol>

Semester	Course Name	Course Outcomes
II <sup>nd</sup>	Research Methodology	<ol style="list-style-type: none"> <li>1. Understand some basic concepts of research and its methodologies select and define appropriate research problem and parameters.</li> <li>2. Identify and discuss the concepts and procedures of sampling, data collection, analysis and reporting.</li> <li>3. Develop a appropriate framework for research studies</li> </ol>
	Advanced Food Science	<p>Theories of Human Development</p> <ol style="list-style-type: none"> <li>1. Define developmental theory and explain how theories are used to understand child behavior and development.</li> <li>2. Examine and discuss major theories of child development such as those of Piaget, Vygotsky, Freud, Erikson, and Bronfenbrenner.</li> <li>3. Analyze the interdependence of the cognitive, psychosocial and physical domains of development.</li> <li>4. Examine and evaluate the role of family, teachers, and other professionals in facilitating children's development.</li> <li>5. Analyze the effect of biological, environmental and cultural influences on development of children of all ages.</li> </ol>
	Theories of Human Development	<ol style="list-style-type: none"> <li>1. Describe and recall the scope and principles of human development</li> <li>2. Summarise the early childhood theories</li> <li>3. Demonstrate and analyze social learning theories</li> <li>4. State and discuss different intelligence test and theories</li> </ol>
	Traditional Textiles and Apparel Designing	<p>After the completion of the course, Students will be able to</p> <ol style="list-style-type: none"> <li>1. Recognize natural and artificial fibers and their properties.</li> <li>2. Understand the basic, chemical and special finishing.</li> </ol>

Semester	Course Name	Course Outcomes
III <sup>rd</sup>	Advance Apparel Designing and Production	<p>To Impart an in-depth knowledge of style reading pattern making and garment.</p> <p>To develop and understand the principles of pattern making through flat pattern.</p> <p>To impart creative and technical and skills for designing product with special emphasis on structural design.</p>
	Women Studies	To impart the knowledge regarding scope and perspective to women's studies in cultural context and acquaint them to various important issues regarding women's studies and development.
	Applied Nutrition-Health and Fitness	<p>To promote the students understanding about the functional benefits of foods for health and fitness.</p> <p>To enable the students to understand the role of nutrition in the dietary management of geriatrics.</p> <p>To enable the students to understand the physiological demands during different sports activities.</p>
	Sustainable development	<p>To understand the concept of sustainability and development.</p> <p>Critically evaluate the inter linkage of people's participation and sustainable development.</p> <p>Understand the community resources and identify the trends in the extent and consequences of utilization.</p> <p>To understand the relationship between environmentally sound technologies and sustainability.</p>
	Computer application in designing	<p>To enable the student to learn/ acquaint the CAD based Application.</p> <p>To understand the work of computers while designing.</p> <p>To develop creativity in designing audio visuals aids.</p>

<b>Semester</b>	<b>Course Name</b>	<b>Course Outcomes</b>
IV <sup>th</sup>	<b>Ergonomics</b>	<ol style="list-style-type: none"> <li>1. Defines ergonomics, knows the ergonomics model and its importance for workplaces.</li> <li>2. Knows the historical development of ergonomics.</li> <li>3. Knows the related disciplines and basic principles of ergonomics.</li> <li>4. Knows human physiology, limits, anthropometry and energy-based work.</li> <li>5. Knows the human body systems.</li> </ol>
	<b>Study of Family and Society</b>	<p>By the end of the course, successful students are expected to:</p> <ol style="list-style-type: none"> <li>1. Identify key trends in family patterns;</li> <li>2. Identify and analyze the social institutions that shape and regulate the ways we organize ourselves into social units called “families”;</li> <li>3. Introduce historical origins of contemporary family formations;</li> <li>4. Critically assess the roles men, women, and children play in families;</li> <li>5. Identify the major problems facing contemporary families;</li> </ol>
	<b>Training and Management</b>	<p>At the end of the course, students should be able to:</p> <ol style="list-style-type: none"> <li>1. Understand the need and process of training need analysis in organizations.</li> <li>2. Understand the process of designing a training programme and its evaluation.</li> <li>3. Understand various training methods and their applicability in different organizational situations.</li> <li>4. Comprehend the tools and techniques of management development.</li> </ol>
	<b>Food Processing and Preservation</b>	<ol style="list-style-type: none"> <li>1. Demonstrate an understanding of the principles and application of food processing and preservation technologies.</li> <li>2. Describe the technologies used to effect preservation</li> <li>3. Describe the manufacture of a variety of foods and food products, including formulated and specialty foods as well as those within the main commodity groups</li> <li>4. Understand and evaluate the implications of processing and preservation methodologies on the physical, chemical, microbiological and nutritional quality of foods</li> <li>5. Evaluate processing technologies for their appropriate application</li> </ol>

# J.S. UNIVERSITY



**SHIKOHABAD, FIROZABAD**

**[SYALLBUS]**

**MASTER OF ARTS (M.A.)**

**HOME SCIENCE**

**Semester System**

**NEW EDUCATION POLICY- 2020**

**Session : 2022-23**

## ***Paper Coding and Credit Distribution***

<b>S. No.</b>	<b>Semester</b>	<b>Title of Paper</b>	<b>Credits</b>	<b>Code Number</b>
1	VII/I	Resource Management	4	A130701T
		Guidance and Counseling Across the Lifespan	4	A130702T
		Fundamentals of Nutrition and Food Science	4	A130703T
		Development Communication	4	A130704T
		Internship	4	A130705P
		Research Project		
2	VIII/II	Research Methodology	4	A130801T
		Advanced Food Science	4	A130802T
		Theories of Human Development	4	A130803T
		Traditional Textiles and Apparel Designing	4	A130804T
		Surface Ornamentation On Textile	4	A130805P
		Research Project	8	A130806R
	<b>One Minor Paper to be selected from other faculty in VII/I or VIII/II Semester 4/5/6</b>			
3	IX/III	Advanced Apparel Designing & Production	4	A130901T
		Women Studies	4	A130902T
		Applied Nutrition- Health and Fitness	4	A130903T
		Sustainable Development	4	A130904T
		Computer Application in Designing	4	A130905R
		Research Project		
4	X/IV	Ergonomics	4	A131001T
		Study of Family and Society	4	A131002T
		Training and Management	4	A131003T
		Food Processing and Preservation	4	A131004T
		Food preservation Techniques	4	A131005P
		Research Project	8	A131006R

Note : Students may chose MINOR paper from Faculty of Science/Commerce/Language/Find art and Performing Art/Education/Rural Science.



## Semester : VII/I

Paper No.	Subject	Course Type	Credit	CIE	UE	Total
C 1	Resource Management	Theory Major	4	25	75	100
C 2	Guidance and Counseling Across the Lifespan	Theory Major	4	25	75	100
C 3	Fundamentals of Nutrition and Food Science	Theory Major	4	25	75	100
C 4	Development Communication	Theory Major	4	25	75	100
C 5	Internship	Practical Major	4	25	75	100
C 6	Other Faculty*	Minor	4	25	75	100
C 7	Research Project	Project	4	25	75	100
			<b>28</b>	<b>175</b>	<b>525</b>	<b>700</b>

## Semester : VIII/II

Paper No.	Subject	Course Type	Credit	CIE	UE	Total
C 8	Research Methodology	Theory Major	4	25	75	100
C 9	Advanced Food Science	Theory Major	4	25	75	100
C 10	Theories of Human Development	Theory Major	4	25	75	100
C 11	Traditional Textiles and Apparel Designing	Theory Major	4	25	75	100
C 12	Surface Ornamentation On Textile	Practical Major	4	25	75	100
C 13	Research Project	Project	4	25	75	100
			<b>24</b>	<b>150</b>	<b>450</b>	<b>600</b>

\*Note : Faculty of linguistic, Faculty of Computer, Faculty of Management, Faculty of Basic Science.

## Semester : IX/III

Paper No.	Subject	Course Type	Credit	CIE	UE	Total
C 14	Advanced Apparel Designing & Production	Theory Major	4	25	75	100
C 15	Women Studies	Theory Major	4	25	75	100
C 16	Applied Nutrition- Health and Fitness	Theory Major	4	25	75	100
C 17	Sustainable Development	Theory Major	4	25	75	100
C 18	Computer Application in Designing	Practical Major	4	25	75	100
C 19	Research Project	Project	4	25	75	100
			<b>24</b>	<b>150</b>	<b>450</b>	<b>600</b>

## Semester : X/IV

Paper No.	Subject	Course Type	Credit	CIE	UE	Total
C 20	Ergonomics	Theory Major	4	25	75	100
C 21	Study of Family and Society	Theory Major	4	25	75	100
C 22	Training and Management	Theory Major	4	25	75	100
C 23	Food Processing and Preservation	Theory Major	4	25	75	100
C 24	Food preservation Techniques	Practical Major	4	25	75	100
C 25	Research Project	Project	4	25	75	100
			<b>24</b>	<b>150</b>	<b>450</b>	<b>600</b>

### Abbreviations :

CIE : Continuous Internal Evaluation

UE : University Exam

# **FIRST SEMESTER**

**Paper- C 1**  
**Resource Management**

Course Type : Theory Major

CIE - 25

Teaching Periods : 4/Week

UE- 75

Credit : 4

**Objectives :**

- (i) To understand the significance of management of resources.
- (ii) To develop the ability to evaluate the management efficiency and effectiveness in the family.
- (iii) To become familiar with the techniques of financial management.

**Contents :**

<b>Unit – I</b>	<b>Money Management</b>	<b>Periods</b>
(i)	Basic Concepts : Permanent income, Total income, National income and personal income.	1
(ii)	Stages of family life cycle and money management .	1
(iii)	Methods of handling money.	1
(iv)	Guidelines for money management.	1
(v)	Budgeting : Steps of preparation of a budget, factors affecting budget, Engel`s Law of consumption, controlling use of money.	4
(vi)	Investment : Meaning, definition, elements, objectives, types and points to be consider in making investments.	4
<b>Unit- II</b>	<b>Time Management</b>	
(i)	Goals of time management.	1
(ii)	Factors affecting time management.	3
(iii)	Constraints in time management.	2
(iv)	Tools of time management	3
(v)	Managerial process applied to time management.	3
<b>Unit- III</b>	<b>Energy Management</b>	
(i)	Goals of energy management.	1
(ii)	Factors affecting energy management.	3
(iii)	Fatigue : Meaning, types and how to control.	4
(iv)	Managerial process applied to energy management.	4

<b>Unit- IV</b>	<b>Work Simplification</b>	<b>Periods</b>
(i)	Meaning and definition of work simplification.	3
(ii)	Teaching of work simplification.	3
(iii)	Mundell`s classes of change.	3
(iv)	Importance for physically handicapped women.	3

### **Sessional Work**

1. Preparation of budget for various income groups.
2. Seminars should be conducted on above topics.
3. Market survey on time and energy saving equipments available in the market.
4. Application of work simplification techniques.

### **References :**

- (i) Steidell and Barton – Work in Home.
- (ii) Gross and Crandall- Management in family living.
- (iii) Varghese M.A. Ogale and Srivasan. K- Home Management.
- (iv) Bielous H. Family fiancé.

## Paper- C 2

### Guidance and Counseling Across the Lifespan

Course Type : Theory Major

CIE - 25

Teaching Periods : 4/Week

UE- 75

Credit : 4

#### Objectives :

- (i) To understand the need for guidance and counseling in human development.
- (ii) To Introduce basic concept in guidance and counseling therapy.
- (iii) To discuss the processes involved in counseling at different stages in life.
- (iv) To acquaint students will record to qualities of guidance work and counselor.

#### Contents :

Unit – I	Guidance and its Nature	Periods
(i)	Meaning, aims, principles and basic assumptions of guidance.	3
(ii)	Needs and importance of child and family guidance.	3
(iii)	Kinds of guidance- Education, Vocational and personal.	6
<b>Unit – II</b>	<b>Guidance of Children at School and Home</b>	
(i)	Elementary school years	3
(ii)	Adolescence- Need of sex education at home and school.	3
(iii)	Middle years	3
(iv)	Old age	3
<b>Unit – III</b>	<b>Life Span Psychological Disorders and Counseling</b>	
(i)	Nature of psychological disorders that require counseling and therapy in the following stages of human development – (a) Childhood (b) Adolescence (c) Adulthood (d) Old Age	3
<b>Unit – IV</b>	<b>Counseling</b>	
(i)	Meaning, aims, principles and basic assumptions of counseling.	3
(ii)	Needs and importance of child and family counseling.	3
(iii)	Qualities and skill of counselor	3
(iv)	Techniques of counseling – directive and non-directive	3

### **Sessional Work**

1. Visit and write report on any two counseling centers such as HIV/AIDS, drug dedication centers..
2. Collect three case studies and analyses the psycho-social problems in each. Prepare case reports.
3. Conduct role play/street play/puppet show etc. to generate community awareness on issues and topics related to human development and family relations.
4. Interaction with practicing counselors working in schools, clinics, women centers and hospitals and preparing a report of the same.

### **References :**

- (i) Gibson R and Mitchell M (1999) introduction to guidance and counseling (5<sup>th</sup> Ed.), New Jersey; Printice Hall Inc.
- (ii) Egan G (2002) the skilled helpers : A systematic approach to effective helping (7<sup>th</sup> Ed.) Pacific grove.
- (iii) Varghese M.A. Ogale and Srivasan. K- Home Management.
- (iv) Bielous H. Family fiancé.

## Paper- C 3

### Fundamentals of Nutrition and Food Science

Course Type : Theory Major

CIE - 25

Teaching Periods : 4/Week

UE- 75

Credit : 4

#### Objectives :

1. To understand the function of food and the role of various nutrients, their requirements and effect of deficiency and excess ( In Brief)
2. To promote basic knowledge pertaining to various food groups and nutrients.
3. To make students familiar with the different methods of cooking, their advantages and disadvantages.
4. To develop ability to improve the nutritional quality of food.

#### Contents :

Unit – I	Basic concepts in Food and Nutrition	Periods
(i)	Basic terms used in the study of food and Nutrition.	1
(ii)	Understanding relationship between food, nutrition and health.	2
(iii)	Functions of food- physiological, psychological and social.	1
<b>Unit – II</b>	<b>Nutrients</b>	
(i)	Functions, dietary source and recommended dietary allowances (RDA) (a) Carbohydrates, Lipids and Proteins. (b) Fat Soluble Vitamins- A, D, E and K. (c) Water soluble Vitamins- B <sub>1</sub> ' B <sub>2</sub> ' B <sub>3</sub> ' B <sub>6</sub> ' B <sub>9</sub> ' B <sub>12</sub> ' and C. (d) Minerals – Calcium, Iron and Iodine	6
<b>Unit – III</b>	<b>Food Groups</b>	
(i)	Selection, nutritional contribution and changes during cooking of the following groups (a) Cereals (b) Pulses (c) Fruits and Vegetables (d) Milk and Milk product (e) Eggs (f) Meat, Poultry and fish (g) Fats and Oils	6



Unit – IV	Method of cooking and preventing nutrient losses	Periods
(i)	Dry, moist frying and microwave cooking.	2
(ii)	Advantage, disadvantages and the effect of various methods of cooking on nutrients.	2
(iii)	Minimizing nutrient losses.	1

### Sessional Work :

1. Working instructions. Weights and measures and table setting, preparing market order.
2. Identification of food sources for various nutrient.
3. Food preparation, understanding the principles involved, nutritional quality and portion size.
  - Beverages : Hot tea/ coffee, milk shakes/ lassi, fruit based beverages.
  - Cereals : boiled rice, pulao, chapati, paratha, puri, pastas.
  - Pulse : Whole, dehusked
  - Vegetables : Curries, dry preparations.
  - Milk and Milk product : Kheer Custard.
  - Meat, Fish and poultry preparations.
  - Egg preparations: Boiled, poached, fried scrambled, omelet, egg pudding.
  - Soups : Borth, plain and cream soups.
  - Baked products : Biscuits, cookies, cream cakes sponge cake preparations, tarts and pies.
  - Snacks : Pakoras, cutlets, Samosa, upma, sandwiches.
  - Salad : Salads and salad dressings.
  - Preserved foods.

### References :

- (i) Bamji MS, Krishnaswany K. Brahma GNV (2009). Textbook of Human Nutrition, 3<sup>rd</sup> Ed. Oxford and IBH publishing Co. Pvt. Ltd.
- (ii) Rainu U, Kashyap S. Narula V, Thomas S., Survira, Vir S., Chopra S (2010). Basic food preparation : A complete manual, forth edition, orient black swan ltd.
- (iii) Srilakshmi (2010) Food Science, 5<sup>th</sup> Ed. New age International Ltd.
- (iv) Wardlaw and Insel MG, Insel PM (2004) Perspectives in Nutrition, 6<sup>th</sup> Ed. Mosby.

## Paper- C 4

### Development Communication

Course Type : Theory Major

CIE - 25

Teaching Periods : 4/Week

UE- 75

Credit : 4

**Objectives :** The course will enable the students to -

- (i) Make students understand the role of communication in development.
- (ii) Get acquainted with the approaches, issues, patterns and perspective for development communication in India.

**Contents :**

Unit – I	Development Communication	Periods
(i)	Definition, nature, role and significance of development and development communication.	2
(ii)	Interrelation between development and development communication.	2
(iii)	Global and historical perspectives of development communication.	2
<b>Unit – II</b>	<b>Models of development Communication</b>	
(i)	Interdependent Model	2
(ii)	Dependency Model	2
(iii)	Basic Need Model.	2
<b>Unit – III</b>	<b>Development Communication project and experiments</b>	
(i)	Traditional Media experiments.	3
(ii)	Modern Media experiments- SITE, JDP & PEARL	3
(iii)	New Media experiments – GYANDOOT, CYER EXPERIMENTS	2
<b>Unit – IV</b>	<b>Strategies for Message design in Development Communication</b>	
(i)	Need Assessment	2
(ii)	Role of communication and audience in message design.	2
(iii)	Assessment of resources and choosing the media.	2
(iv)	Defining concept & form of message.	2
(v)	Designing & implementing the communication	2
(vi)	Evaluation of communication	2

### **Sessional Work**

1. Seminar presentation on any topic from syllabus.
2. Academic assessment through short and long questions.
3. Discussions on issues related to development communication.

### **References :**

- (i) Singh, Kartar (1999), Rural development principles, policies and management, sage publication India Pvt. Ltd., New Delhi.
- (ii) Mudy, B (1992) designing messages with audience participation, sage, New Delhi.
- (iii) Nenla, U (194) Development and communication
- (iv) Kotler, Roberts, Lee (2002) Social Marketing, improving quality of life, 2<sup>nd</sup> Edition, Sage, thousands Obas.
- (v) Servaes, Jacobson and white (1996) Participatory communication for social change, sage, New Delhi.

## Paper- C 5

### Internship

Course Type : Practical Major

CIE - 25

Teaching Periods : 4/Week

UE- 75

Credit : 4

#### **Work Experience/ Internship :**

##### **Focus :**

Knowing does not automatically result in the ability to “do” or to “feel” which are necessary for professional development. Students need exposure to various setting in community and social welfare to enable them acquire some experience of working with specific target group like children, rural-women, adolescent, youth, aged and masses. The assignment will also provide an opportunity for student to get acquainted with innovative projects of community development and welfare. It is a sort of work experience for students.

##### **Objectives :**

To enable the students to get an opportunity for exposure to the functioning of the specific agency.

##### **Placement Agencies -**

KVK`s , Family welfare agencies/ NGO`s/ Special cells of women in distress/ social welfare organization/ Institution meant for international agencies, community radio station televisions institution and dept. of mass communication and journalism, advertising agencies and old age home and hospitals.

##### **Evaluation/ Assessment of students performance may be done on following point :**

- (i) Regularity and punctuality in attendance.
- (ii) Ability to work in the team.
- (iii) Ability to be sensitive to the client.
- (iv) Initiative to organize specific programme.
- (v) Proper record maintenance.
- (vi) Oral presentation

Students have to make presentation and submit a report at the beginning of IX/III Semester.

**Paper- C 6**  
**Minor**  
**(Other Faculty)**

One Minor Paper to be selected from other faculty in VII/I or VIII/II Semester.

**Paper- C 7**  
**Research Project**

Credit : 4

CIE - 25

UE- 75

**Course Content :**

- (i) Identification of research problem
- (ii) Preparation and finalization of synopsis

# SECOND SEMESTER

**Paper- C 8**  
**Research Methodology**

Course Type : Theory Major

CIE - 25

Teaching Periods : 4/Week

UE- 75

Credit : 4

**Objectives :**

- (i) To understand the significance of research methodology in Home Science research.
- (ii) To study the types , tools and methods of research and develop the ability to construct data appropriate to the research design.
- (iii) To develop skills for preparation of research proposal and writing report.

**Contents :**

<b>Unit – I</b>	<b>Introduction to Research</b>	<b>Periods</b>
(i)	Meaning, purpose, approaches and scope in various field of home science	2
(ii)	Types of Research	3
(iii)	Selection of research problem : Need, relevance and feasibility.	2
(iv)	Research design : meaning, purpose and criteria (experimental and observational)	3
(v)	Quantitative and Qualitative approaches	2
<b>Unit – II</b>	<b>Research Process</b>	
(i)	Planning the research	2
(ii)	Defining the research problem	2
(iii)	Research objectives : Definition and formulation of hypothesis/ objectives	2
(iv)	Review of related literature	2
(v)	Basic of sampling : Sampling Vs. Complete Enumeration objectives, Principles and limitations of sampling, sampling techniques, size and error	4



<b>Unit – III</b>	<b>Data Collection Tools and Statistical Methods</b>	<b>Periods</b>
(i)	Primary and Secondary Data, Methods and tools in Data Collection (Schedule, Questionnaire, Interview, Case study method etc.)	2
(ii)	Measurement and scaling techniques, Validity, Reliability, Sensitivity of Data Collection tools	2
(iii)	Processing of data editing , Classification, coding, tabulation of data	2
(iv)	Statistical Measures (Measures of Central Tendency, Dispersion and Correlation)	3
(v)	Test of significance : t- test, chi-square test	3
<b>Unit – IV</b>	<b>Report Writing</b>	
(i)	Summary, Conclusion and Recommendations	3
(ii)	Writing References	2
(iii)	Writing process of Research report : Formal style of writing, preface, chapterization, heading, tables and figures, appendices, bibliography and acknowledgement	7

### **Sessional Work**

1. Prepare a research plan of any field of Home Science.
2. Prepare a schedule/ Questionnaire of the related topic using scaling techniques.
3. Use and importance of coding and preparation of master chart for analysis.

### **References :**

- (i) C.R. Kothari : Research Methodology – Method and Techniques.
- (ii) R. Kumar : Research Methodology : A step by step guide for beginners.
- (iii) M.H. Gopal : Introduction to Research Methodology for Social Science
- (iv) Good, Carter, Scales and Douglas : Methods of Research.

**Paper- C 9**  
**Advanced Food Science**

Course Type : Theory Major

CIE - 25

Teaching Periods : 4/Week

UE- 75

Credit : 4

**Objectives :**

- (i) Enabling students to comprehend the changes in the physiochemical properties of food stuffs during food preparation.
- (ii) Enabling to student to understand and apply the various techniques in the quality evaluation of foods.
- (iii) imparting awareness on the concept of 'food product development'.

**Contents :**

<b>Unit – I</b>	<b>Colloids and Carbohydrates in Food</b>	<b>Periods</b>
(i)	Introduction to food Science	1
(ii)	Physical and chemical properties of foods- changes occurring on cooking and storages.	2
(iii)	Colloids – Properties denaturation of proteins, gelatinization, gel formation, emulsions, foams, browning reactions enzymatic and non-enzymatic.	4
(iv)	Sugar Cookery : Stages of cookery, fondants, fudges, caramels and brittles, crystallization of sugar.	2
(v)	Starch Cookery : Gelation, factors affecting gelation, starch as thickener, different sources of starch and their properties cereals and millets-their milling and parboiling.	3
<b>Unit – II</b>	<b>Proteins and Fats in Food</b>	
(i)	Proteins and Fats in Food	
	(a) Properties of milk protein, other milk products- curds, evaporated, spray dried and condensed milk, cheese, khoya, their use in food preparations.	3
	(b) Cereals, grams and dals- Effect of soaking, germination and fermentation on cereals and pulses, properties of gluten, gluten formation and the factors affecting it.	3

	(c) Eggs- properties of egg- proteins & uses in egg preparations, egg as binding, foaming and emulsifying agent mayonnaise preparation.	3
	(d) Meat-postmortem changes, changes on cooking, fish types, changes during heat treatment.	2
(ii)	Fats and Oils : Properties, smoking points, melting point, hydrogenation, shortening effect, changes and storage, rancidity, oxidative and hydrolytic, whipped cream as double emulsion, different commercial products and their uses.	3
<b>Unit – III</b>	<b>Vegetables and Fruits, Sensory Evaluation</b>	
(i)	Vegetables & Fruits : Structure of vegetable tissues, starch, sugars, pectic substances, celluloses and their effect on texture and palatability, plant pigments, plant enzymes, enzymatic browning use of plant enzymes for textural changes in foods eg. Effect on meat.	4
(ii)	Sensory Evaluation (a) Selection of panel of judges (b) Types of tests (c) Judging Objective methods of measurement of : (a) Colour (b) Texture	2      2
<b>Unit – IV</b>	<b>New product Development</b>	
(i)	Food Additives : Definition, importance, classification & uses	2
(ii)	Leavening agents : Importance, classification, nature & uses	2
(iii)	Food product development : Definition, factors affecting product development and health concerns.	3

**Sessional Work :**

1. Experience in training for taste perception & thresh holds, hedonic scale for attributes of foods & developing score cards. Triangular tests, duo & trio tests and others.
2. Standardization of recipes and methods or reporting recipes.
3. Experiments on crystallization of sugar & effects of temperature, concentration, acids and other preparation & evaluation of any three preparation, laddo, halwa & Gulab jamun.
4. Experiment on starch gelatinization, viscosity, measurement of starch pastes- comparison of different sources of starch.
5. Experiment with eggs to study the properties of coagulation foaming, emulsifying, colouring, effect of quality of eggs on these properties. Preparation of cakes, Mayonnaise evaluation.
6. Milk cookery preparation & evaluation of soup (cream of tomato), cheese, curd ice-cream.
7. Meat- Methods of cooking, factors affecting texture of meat.
8. Pulses- Method of cooking pulses, effect of soaking, alkali, salts, germination.

**References :**

- (i) Charley, H. (1982) : Food Science (2<sup>nd</sup> Edition), John Wiley and Sons, New York.
- (ii) Potter, N. and Hotchkins, J.H. (1996) Food Science, 5<sup>th</sup> Ed., CBS Publishers and distributors, New Delhi.
- (iii) Belitz, H.D. and Geosch, W (1999) : Food Chemistry, 2<sup>nd</sup> Edition, Springer, New York.
- (iv) Manay, N.S. and Shadars Sharaswamy, M. (1987) Food, Facts and Principles. Wiley Eastern Ltd, New Delhi.

## Paper- C 10

### Theories of Human Development

Course Type : Theory Major

CIE - 25

Teaching Periods : 4/Week

UE- 75

Credit : 4

#### Objectives :

- (i) To make the students have knowledge of the theories of human development and behavior -
  - (a) To analyze the major criticisms of a theory.
  - (b) Identify and address the major criticisms of a theory
- (ii) To develop in students an appreciation for primary literature.
- (iii) To introduce the students to the latest theories of human development and behavior.

#### Contents :

Unit – I	Overview of theories	Periods
(i)	Concepts/ definitions of theories	1
(ii)	Role of theory in advancement of knowledge	1
(iii)	Process of theory development	2
(iv)	Psychoanalytic perspective- Freud and Neo Freudians (a) Psycho analytic theory of Freud (b) Alfred Adler (c) Carl Jung (d) Erick Erickson	8
Unit – II	Learning perspective	
(i)	Classical conditioning – Pavlov	3
(ii)	Operant conditioning	3
(iii)	Trail and Error- Thorndike	3
(iv)	Bandura and Walters	3
Unit – III	Cognitive and Moral perspective	
(i)	Piaget`s theory of cognition	3
(ii)	Vygotsky theory	2
(iii)	Information process theory	4
(iv)	Moral reasoning and development-perspective of Kohlberg and piaget	3

<b>Unit – IV</b>	<b>Personality and Contemporary theories</b>	<b>Periods</b>
(i)	Gordon allport	3
(ii)	Kurt Lewin	3
(iii)	Urie Bronfenbrenner	3
(iv)	Maslow	3

#### **Sessional Work :**

1. Term paper on any one of the theories.
2. Seminar presentation of various issues related to theoretical perspectives
3. Presentations/ making reading cards on articles from journal.

#### **References :**

- (i) Hall C.S. and Lindzey G. 1978. Theories of personality (3<sup>rd</sup> Ed.). John Wiley and Sons Toronto.
- (ii) Baldwin A.L. 1967 theories of child development 2<sup>nd</sup> Ed.
- (iii) Ryckman R.M. 1978. Theories of personality, D. Van Nostrand Company, New York.
- (iv) Abramson R.P. 1980 personality, university of California.
- (v) Hilgard R.E. 1975 theories of learning Englewood Chiff. New Jersey.

## Paper- C 11

### Traditional Textiles and Apparel Designing

Course Type : Theory Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

#### Objectives :

- (i) To impart knowledge about the traditional textiles of India.
- (ii) To enable the students to familiarize with the essentials of apparel making.
- (iii) To acquaint with the various steps involved in the apparel making system and to gain skill in making certain garments.

#### Contents :

Unit – I	Introduction to traditional Indian textiles	Periods
(i)	Dacca Muslin	1
(ii)	Chanderi Sarees and Muslin	2
(iii)	Kashmir Shawls	1
(iv)	Brocades of Hyderabad	1
(v)	Banaras Brocades	1
(vi)	Brocades of Gujarat	1
(vii)	Tie and Dye of Rajasthan and Gujarat	2
(viii)	Patola of Gujarat, Orissa and Cuttack (Ikat)	3
(ix)	Kota cotton and Zari border sarees of Rajasthan	3
Unit – II	Embroideries of India	
(i)	Chikankari of U.P.	1
(ii)	Kasuit of Karnataka	1
(iii)	Phulkari of Punjab	1
(iv)	Kashida of Kashmir	1
(v)	Kantha of Bengal	1
(vi)	Embroidery of Kutch and Kathiawar	1
(vii)	Zari Embroidery	1
(viii)	Sindi Embroidery	1
(ix)	Chambal rumal	1
(x)	Manipuri	1

<b>Unit – III</b>	<b>Design analysis with respect to apparel and textile design</b>	<b>Periods</b>
(i)	Introduction to applied art (a) Elements of design                      (b) Principles of design	2
(ii)	Designs : Structural, decorative and abstract design	2
(iii)	Fittings – Principles, common fitting problems for different figure type, their manufacture (a) Short figures    (b) Thin figures (c) Large & Flat chest    (d) Flat and large hips (e) Broad and Narrow shoulder (f) Long short & thick neck	4
<b>Unit – IV</b>	<b>Introduction of Apparel design with respect to fashion</b>	
(i)	Fashion cycle	1
(ii)	Theories of fashion	1
(iii)	Fashion Terminology	1
(iv)	Family clothing	1
(v)	Factors affecting family clothing	1
(vi)	Wardrobe planning for the family	1
(vii)	Techniques in pattern making (a) Flat pattern (b) Drafting (c) Draping	2

#### **References :**

- (i) Agarwal Rajani & Gupta Sanjula : Praidhan Nirman Avam fashion designing.
- (ii) Honey sapna & Patni Manju : Parivarik paridhan vyavastha.
- (iii) Patni Manju : Vastra vigyan and paridhan vyavastha, star pub., Agra
- (iv) Sing Vrinda : Vastra Vigyan and Paridhan
- (v) Tumter G.L. Cutting & Tailoring
- (vi) Verma pramila : Vastra Vigyan and paridhan



## Paper- C 12

### Surface Ornamentation on Textile

Course Type : Practical Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

#### Objectives :

To impart skill of value addition to various products through dyeing and printing.

#### Contents :

1.	Textile design through dyeing	Practical
(i)	Dacca Muslin (a) Tie (b) Batik	3
(ii)	Making an article using each of these	3
2.	Preparation of screens for printing and making an article of textile design through screen printing.	10
3.	Textile design through block printing and stencil printing and making an article use each these	10
4.	Usage of traditional contemporary embroidery techniques for developing an article.	6
5.	Preparation an article using any tow of the above techniques.	4
6.	Developing a portfolio exhibiting various styles and methods of dyeing, printing and embroidery traditionally used in India.	6
7.	Report of visit to dyeing and printing units.	4
8.	Learning to exhibit products made in the semester.	2

#### References

1. V. A. Shenai( 1987 ), Chemistry of Dyes and principles of Dyeing, Sevak. Prakasan, Mumbai.
2. H. A. Lubs, Robert E. Chemistry of Synthelic Dyes and pigments, Krieger Publishing company, New Yark.
3. V. A. Shenai( 1999), Azo Dyes – Facts and Figures- SevakPrakashan, Mumbai.
4. R. S. Prayag, Technology Textile printing- Nayes Data Corporation Carporation.

**Paper- C 13**  
**Research Project**

CIE - 25  
UE- 75

Credit : 4

**Contents :**

1. Review of literature and methodology of the study.
2. Finalization of data collection tool.

# THIRD SEMESTER

## Paper- C 14

### Advanced Apparel Designing & Production

Course Type : Theory Major

CIE – 25 Marks

Credit : 4

UE- 75 Marks

#### Objectives :

- (i) To impart an depth knowledge of style reading pattern making and garment construction techniques.
- (ii) To develop and understand the principles of pattern making through flat pattern.
- (iii) To impart creative and technical and skills for designing product with special emphasis on structural design.

#### Contents :

Unit – I	Introduction	Periods
(i)	Target market, Merchandising	1
(ii)	Line and Its Development	1
Unit – II	Apparel Production	
(i)	Costing a garment	1
(ii)	Purchasing of piece goods	1
(iii)	Production schedule	1
(iv)	Garment Assembly	1
(v)	Preparation for dispatch	1
Unit – III	Techniques of Mass Production	
(i)	Planning of garment business, procurement of raw material, organization in an apparel firm.	6
(ii)	Sampling department-importance, objective, types of samples (size set, fit sample, prototype sample, production sample), Design development and developing a sample garment.	
(iii)	Cutting department- cutting procedure- fabric, laying, marker preparation, sorting, numbering & bundling	
(iv)	Machinery and equipment require for garment production for industrial level cutting, sewing, finishing and embellishment	

Unit – IV	Production and Quality Control	Periods
(i)	Production Department- Selection of production system (progressive bundle system, unit production system), modular manufacturing, piece work, production planning.	2
(ii)	Finishing and pressing department Trimming, packing.	2
(iii)	Applying quality control, quality assurance in production process- fabric cutting, sewing, finishing and packing.	2

Sr. No.	<u>Sessional Work</u>	Periods
1.	Drafting of personal blouse pattern and plain sleeve a block and construction simple sari blouse.	8
2.	Manipulation of personal block – (a) Relocation of darts by slash and spread method (b) Converting darts into tucks, (c) Gathers (d) Yokes (e) Lines (f) Construction of three sari blouse using any of the above	8
3.	Development of basic skirt block and its adaptation into style variations (half scale) construction of any one skirt for self. (a) Its adaptation to various on half scale. (b) Construction of any one of these/ Indo-Western outfit	8
4.	Designing of two adaptive clothing for each of the following and construction of any one for any group – (a) Maternity wear                      (b) Feeding mothers (c) Physically challenged              (d) Old age	8

## References

1. Leonard G. Rubin (1976): The world of fashion, Publication canfield Press, San Francisco.
2. Patrick John Ireland: Fashion Design Illustration, B. T. Batsford Ltd. London.
3. Prakash, K. (1989): Impressions, Ethnic Textile Designs, Deluxe Packaging.
4. Prakash, K. (1989): Impressions, Deluxe Packaging.
5. Carr, H. and Pomery, J. (1992): Fashion Design and Product Development, Blackwell scientific Publication, London, Edinburgh, Boston.

**Paper- C 15**  
**Women Studies**

Course Type : Theory Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

**Objectives :**

To impart knowledge regarding scope and perspectives to women studies in cultural context and acquaint them to various important issues regarding women`s studies and development.

**Contents :**

<b>Unit – I</b>	<b>Women Perspectives and Movements- A General Overview</b>	<b>Periods</b>
(i)	Meaning and scope of women`s studies	2
(ii)	Women`s perspective and its constituent elements in present social economics and cultural context	4
(iii)	Women`s Movement in pre independent and post independent periods and present trends	4
(iv)	Milestones and obstacles in women`s movement in India	2
<b>Unit – II</b>	<b>Women and the Indian Scenario</b>	
(i)	Feminism, its basic types and their relevance to Indian context, facts and myths of feminism.	2
(ii)	Importance of Women`s participation in economics, educational, social and political development	6
(iii)	Gender role and sex role stereotypes, changes in educational, economics, social and familial status of women	4
<b>Unit – III</b>	<b>Women challenges and Issues</b>	
(i)	Population statistics and sex ratio	2
(ii)	Working women and challenges- problems of working women in unorganized sector	3
(iii)	Issue concerning women gender violence, dowry harassment and deaths, suicides, commercial and religious prostitution, eve-teasing, family and domestic violence foeticide and infanticide, child marriage.	7

Unit – IV	Media, Laws and Policies	Periods
(i)	A critique of laws for women	4
(ii)	Women and mass media	2
(iii)	Women`s health and family planning, health indicators	2
(iv)	National Women`s commission and state commission for women and their role in women studies and policy issues	4

### Sessional Work

1. Observational visits to women`s organization.
2. Planning and organizing awareness campaigns on vital women`s issues.
3. Portrayal of women in mass media- news papers, magazines, television, movies, critical analysis.
4. Situation analysis of gender equality and equity.

### References:

1. Baker, H.A. Berthieide, G.W. and other (Eds.) (1980) Women Today: A multidisciplinary approach to women`s studies. Brooks/cole publication.
2. Joseph, A & Shama K. (Ede) (1994). Whose News? The media and women`s issues: sage: New Delhi.
3. Jain D & Banerjee N. (1985) The tyranny of house hold, investigative essay on women and work: Vikas New Delhi.
4. Anderoson L. Margoret (1997) Thinking about women sociological perspective on sex and gender, allyn and bacon, A via com company. 160 gold stroet needhenin heights, U.S.A.
5. Dutta R.K. 2003 Crimes Against Women Reference Press.
6. Devi L. 1998 Encyclopedia of Women Development and Family Welfare. Volumes 1-6, Anmol Publication Pvt. Ltd. New Delhi.
7. Baruah A. 2003 Women in India Anmol Publication Pvt. Ltd.
8. Kahol Y. 2003 Violence Against women Reference Press.

## Paper- C 16

### Applied Nutrition- Health and Fitness

Course Type : Theory Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

#### Objectives :

- (i) To promote the students understanding about the functional benefits of foods for health and fitness.
- (ii) To enable the students to understand the role of nutrition in the dietary management of geriatrics.
- (iii) To enable the students to understand the physiological demands during different sports activities.

#### Contents :

Unit – I	Antioxidants in health & disease	Periods
(i)	Effect of oxidants on macromolecules- Carbohydrates, Protein, Lipids, Nucleic acids.	3
(ii)	Nutrient antioxidants with potent health effects	2
(iii)	Non-nutritive food components with potential effects (Flavonoids- polyphenols and tannates, phytoestrogens, cyanogenic compounds)	2
(iv)	Pre and Probiotics	2
(v)	Foetal origin of Non-communicable disease.	1
(vi)	Nutrigenomics- the future of nutrition care for health management, treatment and prevention of diseases.	2
Unit – II	Geriatric nutrition- Multifaceted aspects of ageing	
(i)	Ageing process- changing demographic trends, theories of ageing.	3
(ii)	The ageing process- physiological, biochemical and body composition changes.	3
(iii)	Health and Nutritional problems of the elderly.	2
(iv)	Nutritional requirements and dietary guidelines.	2
(v)	Community geriatrics- Dimension, issues and solutions.	2



<b>Unit – III</b>	<b>Nutritional Management- health &amp; fitness</b>	<b>Periods</b>
(i)	Definition, components and assessment criteria of – (a) Specific fitness (b) Health status	2
(ii)	Holistic approach to management of fitness and health – (a) Energy input and output (b) Diet and exercise (c) Effect of specific nutrients on work performance and physical fitness. (d) Nutrition, exercise, physical fitness and health inter-relationships.	8
(iii)	Alternative system for health and fitness like ayurveda, yoga, meditation, vegetarianism and traditional diets.	2
<b>Unit – IV</b>	<b>Nutrition in sports</b>	
(i)	Physiological aspects- Metabolic changes during sports activity.	2
(ii)	Energy system for endurance and power activity	2
(iii)	Fuels for muscle contraction, Nutritional requirement for sports : Pre game, during and post game meal (short-duration, endurance)	4
(iv)	Water & Electrolyte balance and replenishments	2
(v)	Erogogenic aids, sports drink, uses and abuse of dietary supplements	2

### Sessional Work

1. Market survey for commercial nutritional products for physical fitness & sports performance available in India.
2. Yoga and Pranayaam.
3. Vegetarian, Vegan and traditional Diets
4. Diet for different sports activities- Endurance & Power.

#### **References:**

1. Shils ME, Olson JA and Shike N (1994). Modern Nutrition in Health & Disease. 8<sup>th</sup> Edition, Vol I and II, Philadelphia Lea and Febiger.
2. Bagchi K and Puri S (1999). Diet and Ageing: Exploring some facts. Society of Gerontological research and HelpageIndia, New Delhi.
3. Parizkova J (1997). Nutrition, physical activity and health in early life. Ed. Wolinsky, I, CRC press.
4. McArdle W, Katch F, Katch V (1996). Exercise physiology, exercise energy, nutrition and human performance. 4<sup>th</sup> Edition. Williams and Wilkins, Philadelphia.
5. Indian Council of Medical Research (2000). Nutrient Requirements and Recommended Dietary Allowances for Indians: A report of the expert group of the ICMR, New Delhi.

**Paper- C 17**  
**Sustainable Development**

Course Type : Theory Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

**Objectives :**

- (i) To understand the concept of sustainability and development.
- (ii) Critically evaluate the inter linkage of people`s participation and sustainable development.
- (iii) Understand the community resource and identify the trends in the extent and consequence of utilization.
- (iv) To understand the relationship between environmentally sound technologies and sustainability.

**Contents :**

<b>Unit – I</b>	<b>Introduction Sustainability</b>	<b>Periods</b>
(i)	Sustainability- Meaning, concept and implications, for development. Sustainable development- concept, philosophy, goals and challenges.	4
(ii)	Dimensions of sustainable development	3
(iii)	Theories of development	2
(iv)	Changes in concept of development	3
<b>Unit – II</b>	<b>People`s participation and sustainability</b>	
(i)	People`s participation- History, concept and controversies	3
(ii)	Types and forms in development initiatives	3
(iii)	Relationship between participation, learning and sustainability, inter linkages of people`s participation for building local knowledge, capacity of people and local institutions.	5
<b>Unit – III</b>	<b>Community resource perspectives</b>	
(i)	Concepts of resources, national and shared resources, ecological (air, water, fuel, flora, fauna)	4
(ii)	Indicators of environment unsustainability.	3

<b>Unit – IV</b>	<b>People`s initiative and sustainability</b>	<b>Periods</b>
(i)	Ecology and resource conservation-concepts, biodiversity, resource conservation methods, renewable energy and resources	8
(ii)	Environmentally sound technologies; their impact on sustainable management of resources, adoption pattern	5
(iii)	Environment and habitat.	2
(iv)	Advantages and lacuna in the initiatives of different social structures in sustainable community resource management initiatives	3

### Sessional Work

1. Study of community resources in the selected area.
2. Leadership building.
3. Capacity building.
4. Self-reliance for sustainable development.

#### **References**

- 1- Dale, R. (2000): organization and development strategies, structure and processes sage publication, New Delhi.
- 2- Sinha PC( 1998) international and encyclopedia of sustainable development Vol. 1-20 Anmol publication pvt. Ltd New Delhi.

## Paper- C 18

### Computer Application in Designing

Course Type : Practical Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

#### Objectives :

- (i) To enable students to learn/ acquaint the CAD based application.
- (ii) To understand the work of computers while designing.
- (iii) To develop creativity in designing audio- visual aids.

#### Practical :

Sr. No.	Use of Computer peripherals	Periods
1.	(a) Scanner (b) Printer (c) Storage device	6
2.	<b>Use of designing software</b>	
	(a) Power point (b) Coral draw (c) Photo shop (d) Page maker	18
3.	<b>Planning and preparation of communication material for rural women related to agriculture/home science –</b> (a) Sides (b) Leaflet/ Folder (c) Booklet/ flip book (d) Cover page of different publications	16
4.	Field testing of developed communication material.	2
5.	Evaluation of the developed material	2

Reference: List of books related Computer Designing, Coral draw, photo shop and Page maker

1. Computer Graphics and Virtual Reality 2ed Willey Publication by R. K Mourya
2. Photoshop CS6 in Simple Steps by Congent Learning Solution Incorporation
3. Graphic Design Exercise Book - Revised Edition **Author:** Jessica Glaser
4. PageMaker 7 from A to Z **Author:** Marc Campbell Publisher Laxmi Publications
5. CorelDRAW X6 The Official Guide Paperback – by Gary David Bouton

**Paper- C 19**  
**Research Project**

CIE - 25  
UE- 75

Credit : 4

**Contents :**

1. Data collection for the study.
2. Interpretation of the data.

# **FOURTH SEMESTER**

**Paper- C 20**  
**Ergonomics**

Course Type : Theory Major  
Teaching Periods : 4/Week  
Credit : 4

CIE – 25 Marks  
UE- 75 Marks

**Objectives :**

- (i) To become aware of the role of ergonomics in work effectiveness and efficiency.
- (ii) To understand the environment factors contributing to safety, control and well-being of individual performing the work.
- (iii) To know application of ergonomic consideration in designing of work place.

**Contents :**

<b>Unit – I</b>	<b>Essentials of Ergonomics</b>	<b>Periods</b>
(i)	Definition, scope of Ergonomics in home.	4
(ii)	Need and importance of Ergonomics.	4
(iii)	Components of worker input-affective, cognitive, temporal physical.	2
<b>Unit – II</b>	<b>Work and Work Environment</b>	
(i)	Work component-content of job, analysis of work and amount of house hold work.	6
(ii)	Knowledge of various environmental factors and their effect-heat, noise, vibration, light and atmospheric pollution.	6
<b>Unit – III</b>	<b>Anthropometry and Biomechanics</b>	
(i)	Definition of Anthropometry, Anthropometric consideration and principles.	4
(ii)	Working posture and motions, common postural problems and factors to be considered, effect of wrong posture on body, correct technique of lifting and carrying weight.	6
(iii)	Body mechanics : Definitions, principles, height of work surface.	4

Unit – IV	Work place : The Kitchen	Periods
(i)	Workers consideration in work space design.	3
(ii)	Functional design of work place.	3
(iii)	Work centers	3
(iv)	Component of work place.	3

### Sessional Work

1. Survey on different types of work center.
2. Identifying anthropometric measures and types of posture during work in the kitchen.
3. Preparing educational material for incorrect postures.

### References:

- a. Asrard, P., Roods H.T.K. – Text book of work physiology.
- b. HauptandFeinleis – Physiology of Movement.
- c. Nag P.K. – Ergonomics and Work Design.
- d. Cross man Richard – Ergonomics Pocket Book
- e. Steidaland Bratton – Work in Home.
- f. TulandWeerdneester – Ergonomics for beginners.
- g. Gandtora, Oberoi and Sharma – Essential of Ergonomics.
- h. Amit Bhattacharya - Occupation Ergonomics.  
and James D. Mcglothlin (Theory and Application)
- i. Karl H.E.Kroemer and - Office Ergonomics  
Anne D. Kr



**Paper- C 21**  
**Study of Family and Society**

Course Type : Theory Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

**Objectives :**

- (i) To understand family as a component of socio-cultural milieu and context.
- (ii) To familiarize student with developmental perspectives in family life-cycle.
- (iii) To understand variations in family life patterns.
- (iv) To create awareness regarding philosophy, structure, function, needs and strengths of families with specific reference to the Indian family.

**Contents :**

<b>Unit – I</b>	<b>The family in social context</b>	<b>Periods</b>
(i)	The family as a component of social system (a) Family as an evolving and dynamic institution. (b) Functions of family	6
(ii)	Types of family- Nuclear, joint, extended, alternate families (single parent, female headed families, DINK families, adopted families and live in families)	6
<b>Unit – II</b>	<b>Mental Hygiene, family disorganization and legislatives</b>	
(i)	Mental health, meaning and movement, its importance in family life.	3
(ii)	Family counseling process.	3
(iii)	Divorced and separated families, legislations pertaining to marriage, property and adoption.	6
<b>Unit – III</b>	<b>Contemporary Issues and concerns</b>	
(i)	Dowry	3
(ii)	Family violence	3
(iii)	Family crises	3
(iv)	Gender and role discrimination	3

Unit – IV	Family and Societal changes and their influences on family working	Periods
(i)	Working women in family	3
(ii)	Family health issues	3
(iii)	Religion and family cohesiveness	3
(iv)	Ecology and family	3

### Sessional Work

1. Identification and study of family in relation to societal changes.  
(a) Working women (b) Family health issues (c) Ecology and Family
2. Case study of three families in different stages of family life cycle and reporting their objectives, needs and adjustment.
3. Seminar presentation of five families in distress reported in media.

### References:

1. Kenkel W.F. 1973 The Family in Perspective (III Edition) Appleton Century Crofts Meredith corporation. New York.
2. Stewart E.W. 1978 sociology – The Human Science Mc Graw Hill Company.
3. Leslie G.R. 1976. The Family in social Context, Oxford University Press New York
4. Duvall E.M. 1962. Family Development J.P. Lippincot Co.
5. Wineh R.F. 1963. The Modern Family. Holt Rinchart and Winston.
6. Adarms B.N. 1975. The family: A sociological Interpretation. Rand Menully Co. Chicago.
7. Ahuja R. 1997 India Social System (IInd Edition) Rawat Publishing Jaipur
8. Lock S.L. 1992. Sociology of the family Prentice Hall London.

**Paper- C 22**  
**Training and Management**

Course Type : Theory Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

**Objectives :**

- (i) To be aware of the overall goals of designing training programmes for development.
- (ii) To understand the different methodologies of training.
- (iii) To conceptualize the training process.
- (iv) To develop skill in training programme.

**Contents :**

<b>Unit – I</b>	<b>Training</b>	<b>Periods</b>
(i)	Concept, need and importance of training.	3
(ii)	Principles of adult learning.	2
(iii)	Facilitation skill in training, paraphrasing summarizing, question asking.	3
(iv)	Training process-phases of training process –pre-training, training an post-training.	3
(v)	Conceptual models of training process-simple elaborated and spiral	3
(vi)	Participatory and conventional training	3
<b>Unit – II</b>	<b>Designing Training Programme</b>	
(i)	Need Assessment-concept and techniques	4
(ii)	Designing overall training schedule	5
<b>Unit – III</b>	<b>Management of Training Programme</b>	
(i)	Physical arrangements, selection of participants, selection of trainers/resource persons, aids and equipment transportation, finances, monitoring of training.	4
(ii)	Organizational factors-working environment, leadership, values, mechanics of change, organizations as socio technical system-impact development.	4
(iii)	Developing organization structures for facilitating micro and macro level interventions for facilitating development.	4

<b>Unit – IV</b>	<b>Evaluation of training</b>	
(i)	Issues in evaluation in training, evaluation of learning in terms of gain in knowledge, attitude and skill; measurement of changes in behavior in participants; measurement of results/impact of training.	10

### Sessional Work

1. Designing training programmes for different developmental goals.
2. Developing skills in selection and use of different training methods-case study, role playing, psychodrama, buzz group, group discussion, transactional analysis, process work, micro labs, business games, etc.
3. Organizing and conducting training programmes.

### **References**

1. William R. Tracy, "Designing training & development system" Bombay T. publication.
2. Singh B. Manual, "Advances in Training Technology (manual IARI)"
3. William R. Tracy, "Designing training & development sy

## Paper- C 23

### Food Processing and Preservation

Course Type : Theory Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

#### Objectives :

- (i) Enabling students to understand the principles and processes involved in food processing.
- (ii) Familiarizing the students with the technological innovation for various food stuffs.
- (iii) Making students aware of the role packaging plays in the delivery of food stuffs.

#### Contents :

Unit – I	Food Preservation	Periods
(i)	Principles underlying food preservation operations : (a) Thermal                      (b) Refrigeration and Freezing (c) Dehydration                (d) Radiation	6
(ii)	Use of chemical additives, ionizing radiations, pickling and curing in preservations.	4
Unit – II	Processing technology of foods	
(i)	Cereals : Wheat milling process, baking technology, production of bread, barley malting, rice processing, fractionation, parboiled rice	4
(ii)	Fruits and Vegetables : Changes during ripening	2
(iii)	Canning process of fruits and vegetables	2
(iv)	Milk and Milk products : Milk processing, separation, standardization, pasteurization, homogenization, ultrahigh sterile milk.	4
(v)	Meat and Fish processing : Rigor mortis, ageing, tenderizing, curing, salting, pickling.	2

<b>Unit – III</b>	<b>Fortification and Extrusion Technology</b>	
(i)	Fortification Technology – Objectives – Nutritional significance – Selection of vehicle – Fortification of salt, cereal products & dairy products. – Objectives	2
(ii)	Extruded Food : An introduction to extrusion technology	2
<b>Unit – IV</b>	<b>Packaging Technology, Food Labeling &amp; Food Laws</b>	
(i)	An Introduction to packaging technology – Objectives – Based packaging materials and their protective qualities. – Effect of packaging on the nutritive value of foods.	2
(ii)	FPO and other food laws governing Indian Food Industry.	2

### Sessional Work

1. Seminar presentation on any topic from syllabus.
2. Academic assessment through short and long questions.
3. Discussions on any topic from entire syllabus.

### References:

- Dey S: Outlines of Dairy Technology, Oxford University Press, Delhi.
- Desrosier NW: Elements of Food Technology, Connecticut, USA: AVI publishing co.
- Mat : Cereal Technology, Connecticut, USA: AVI publishing co.
- Siddapa, GS (1986), Preservation of Fruits & Vegetables, ICAR Publication.
- National Dairy development board, Amul, Milk and Milk products processing
- Gould GW. New Methods of Food Preservation. Blacklie. Academic & Professional, London.

## Paper- C 24

### Food Preservation Techniques

Course Type : Practical Major

CIE – 25 Marks

Teaching Periods : 4/Week

UE- 75 Marks

Credit : 4

#### **Objectives :**

- (i) Enabling students to understand the principles and processes involved in food processing.
- (ii) Familiarizing the students with the technological innovation for various food stuffs.
- (iii) Making students aware of the role packaging plays in the delivery of food stuffs.

#### **Practical :**

- 1- Dehydration of fruits and vegetables and shelf life studies : is effect on colour, texture and flavour.
- 2- Preservation of fruits and vegetables using low temperature.
- 3- Preservation of fruits and vegetables using heat, salt and sugar.
- 4- Processing of tomato products.
- 5- Processing of jams, jellies and marmalades.
- 6- Processing of pickles and brines.
- 7- Prepare simple extruded foods.

**Paper- C 25**  
**Research Project**

CIE - 25  
UE- 75

Credit : 4

**Contents :**

Report writing and finalization of research project.