NATIONAL EDUCATION POLICY, 2020
MASTER OF ARTS IN HOME SCIENCE
Institute of Home Science,
Dr. Bhimrao Ambedkar University, Agra

Course Code	Course Title: B.Sc. (Home Science) VII Semester/ M. Sc. (H.Sc.) I Semester	Course Type	Marks		Total	Credit	Course Mapping		
			CIE	UE			EC	EPC	SDC
C 1	Resource Management	Theory Major	25	75	100	4			
C 2	Guidance and Counseling Across the Lifespan	Theory Major	25	75	100	4			
C 3	Fundamentals of Nutrition and Food Science	Theory Major	25	75	100	4			
C 4	Development Communication	Theory Major	25	75	100	4			
C 5	Internship	Practical Major	25	75	100	4			
C 6	Other Faculty *	Minor	25	75	100	4			
C 7	Research Project	Project	25	75	100	4			
			175	525	**700**	28			
Course Code	**Course Title: B.Sc. (Home Science) VIII Semester/ M. Sc. (H.Sc.) II Semester**	**Course Type**	**Marks**		**Total**	**Credit**	**Course Mapping**		
			CIE	**UE**			**EC**	**EPC**	**SDC**
C 8	Research Methodology	Theory Major	25	75	100	4			
C 9	Advanced Food Science	Theory Major	25	75	100	4			
C 10	Theories of Human Development	Theory Major	25	75	100	4			
C 11	Traditional Textiles and Apparel Designing	Theory Major	25	75	100	4			
C 12	Surface Ornamentation on Textile	Practical Major	25	75	100	4			
C 13	Research Project	Project	25	75	100	4			
			150	450	**600**	24			

*Faculty of Linguistic, Faculty of Computer, Faculty of Management, Faculty of Basic

Bachelor (Research) in Faculty

Course Code	Course Title M.Sc. (Home Science) III Semester/ SEMESTER IX	Course Type	Marks		Total	Credit	Course Mapping		
			CIE	UE			EC	EPC	SDC
C 14	Advanced Apparel Designing & Production	Theory Major	25	75	100	4			
C 15	Women Studies	Theory Major	25	75	100	4			
C 16	Applied Nutrition-Health and Fitness	Theory Major	25	75	100	4			
C 17	Sustainable Development	Theory Major	25	75	100	4			
C 18	Computer Application in Designing	Practical Major	25	75	100	4			
C 19	Research Project	Project	25	75	100	4			
			150	450	**600**	24			
Course Code	**Course Title** **M.Sc. (Home Science) IV Semester/** **SEMESTER X**	**Course Type**	**Marks**		**Total**	**Credit**	**Course Mapping**		
			CIE	**UE**			**EC**	**EPC**	**SDC**
C 20	Ergonomics	Theory Major	25	75	100	4			
C 21	Study of Family and Society	Theory Major	25	75	100	4			
C 22	Training and Management	Theory Major	25	75	100	4			
C 23	Food Processing and Preservation	Theory Major	25	75	100	4			
C 24	Food Preservation Techniques	Practical Major	25	75	100	4			
C 25	Research Project	Project	25	75	100	4			
	Total		150	450	600	24			

(MASTER IN FACULTY)

Mapping of the course to Local/ Regional/National/Global need：

***Loc:** **Local Need** ***Reg:** **Regional Need** ***Nati :** **National Need** ***Glob:** **Global Need**

PGDR (Home Science)

Course Code	Course Title: Semester XI	Course Type	Marks		Total	Credit	Course Mapping		
			CIE	UE			EC	EPC	SDC
C 1	Thrust areas of Home Science	Major	25	75	100	6			
C 2	Essentials of Entrepreneurship	Major	25	75	100	6			
C 3	Research Methodology	Major	25	75	100	4			
	Research Project (Qualifying)								
	Total		75	225	**300**	16			

MASTER OF ARTS IN HOME SCIENCE

Programme Educational Objectives (PEOs)

The Program Educational Objectives (PEOs) for the Master of Science in Home Science (General) describe accomplishments that post graduates are expected to attain.

PEO-1: To develop knowledge about various field of home science.

PEO-2: Impart skill training programme

PEO-3: Be committed as responsible consumers and able designers

PEO-4: Acquire knowledge, skill and attitude to work with the communitie

Programme Outcomes (POs)

The students of Master of Science in Home Science will be able to:

PO-1: M.A Home Science has been innovatively designed to enable students to acquire knowledge in the field of -

- ✓ Human development and family studies
- ✓ Food and nutrition
- ✓ Extension communication and management
- ✓ Textile and Apparel Design
- ✓ Family resource management

PO-2: The curriculum has an integrated approach of combining theory, practical and field work.

PO-3: To develop relevant skills and make students efficient in academics, research, industry and community service in the field of Home Science

Programme Specific Outcome (PSOs)

After the successful completion of Master of Science in Home Science, the students will able to:

PSO-1: Get sensitized on the issues of society

PSO-2: Apply theoretical knowledge and practical exercise for investigation in the area of home science.

PSO-3: Acquire knowledge to develop entrepreneurial skills

PSO-4: Practical training/exposure through internship, field visit, project work, expert lectures, demonstration

PSO-5: Competency in rural development practices

PSO-6: Focus on updating with National & Global issues and concerns.

M.A. (H.Sc.)

(2022)

(As per NEP-2020 guidelines)
Session- (2022-2023)

Semester VII

Paper- C 1

Resource Management

M.A. (Home Science) I Semester/

B.A. (H.Sc.) Semester VII

Course Type: Theory Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 4/Week
Credits: 4

Course Objectives

This course will enable the students:

- To understand the concept of income and budget making.
- To develop the ability to manage the time efficiently.
- To know about fatigue and energy management.
- To become familiar with the techniques of work simplification.

CONTENTS

Unit – I	Money Management	Periods
	(a) Basic concepts: Permanent income, Total income, Potential income, National income and Personal income.	1
	(b) Stages of family life cycle and money management.	1
	(c) Methods of handling money.	1
	(d) Guidelines for money management.	1
	(e) Budgeting: Steps of preparation of a budget, Factors affecting budget, Engel's law of consumption, controlling use of money.	4
	(f) Investment: Meaning, definition, elements, objectives, types and points to	4

	be consider in making investments.	
Unit – II	**Time Management**	
	(a) Goals of time management. (b) Factors affecting time management. (c) Constraints in time management. (d) Tools of time management. (e) Managerial process applied to time.	1 3 2 3 3
Unit-III	**Energy Management**	
	(a) Goals of energy management. (b) Factors affecting energy management. (d) Fatigue: Meaning, types and how to control. (e) The managerial process applied to energy management.	1 3 4 4
Unit- IV	**Work simplification**	
	(a) Meaning and definition of work simplification. (b) Techniques of work simplification.	3 3 3

	(c)	Mundell's classes of change.	3
	(d)	Importance for physically handicapped women.	

SESSIONAL WORK

(a) Preparation of budget for various income groups.

(b) Seminars should be conducted on above topics.

(c) Market survey on time and energy saving equipments available in the market.

(d) Application of work simplification techniques.

References

(a) Varghese M.A. OgaleandSrivasan. K - Home Mgt.

(b) Bigelous H. Family Finance.

(c) Gross and Crandall - management in family living.

(d) Steidell and Braton - work in home.

Course Outcomes :

After completing this course, student is expected to learn the following:

CO1: Ability to understand the concepts of time management with its types and stages.
CO2: Gain knowledge of energy management with its goals and factors.

CO3: To understand the concept of work simplification.

Abbreviations:

CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping :

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	3	3	2	3	2	2	2	2
CO2	3	3	3	2	3	2	2	3	2
CO3	3	3	3	2	3	2	2	3	2

Matching: '0to 30% = 1: '30% to 60% = 2: '60% to 100% = 3

Paper – C 2
Guidance and Counseling Across the Lifespan
M.A. (Home Science) I Semester
B.A. (H.Sc.) Semester VII

Course Type: Theory Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 4/Week
Credits: 4

Course Objectives: This course aims to develop an understanding about the concept of guidance and counselling among students, Recognize the behavioural problems and examine strategies for positive behaviour management and to teach students an ethical approach of counselling.

UNIT- I	**Guidance and its Nature**	**PERIODS**
	a. Meaning, aims, principles and basic assumptions of guidance	**3**
	b. Needs and importance of child and family guidance	**3**
	c. Kinds of guidance- educational, vocational and personal	**6**
UNIT- II	**Guidance of Children at School and Home**	
	a. Elementary school years	**3**
	b. Adolescence- need of sex education at home and school	**3**
	c. Middle years	**3**
	d. Old age	**3**
UNIT-III	**Life Span Psychological Disorders and Counseling**	
	Nature of psychological disorders that require counseling and therapy in the following stages of human development-	
	a. Childhood	**3**
	b. Adolescence	**3**
	c. Adulthood	**3**
	d. Old age	**3**

UNIT- IV	**Counseling**	
	a. Meaning, aims, principles and basic assumptions of Counseling	**3**
	b. Needs and importance of child and family counseling	**3**
	c. Qualities and skills of counsellor	**3**
	d. 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 deaddiction 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:

1. Gibson R and Mitchell M(1999) introduction to guidance and counseling (5^{th} ed) New Jersey:Printice Hall Inc.
2. Egan G (2002) the skilled helpers : A systematic approach to effective helping (7^{th} ed) Pacific grove Ca:Brooks /Cole.

Course Outcomes:

This course will enable the students-

CO-1: To understand the need for guidance and counseling in human development.
CO-2: To introduce basic concepts in guidance and counseling therapy.
CO-3: To understand the processes involved in counseling at different stages in life.
CO-4: To learn qualities of guidance workers and counselor.

Abbreviations:

CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	2	2	2	1	2	1	3
CO2	2	2	2	1	2	1	2	1	2
CO3	2	2	2	2	2	1	2	1	2
CO4	2	2	2	1	2	1	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper-C3

Fundamentals of Nutrition and Food Science
MA (Home Science) I Semester
B.A. (H.Sc.) Semester- VII

Course Type: Theory Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 4/Week
Credits: 4

Course objective: This course aims to understand the principles and concepts underlying the relationship between food, nutrition, and human health. and provide a comprehensive foundation for students to understand the interdisciplinary nature of nutrition and food science and its relevance to human health.

UNIT- I - Basic concepts in Food and Nutrition

1. Basic terms used in the study of Food and Nutrition.
2. Understanding relationship between food, nutrition and health
3. Functions of food – physiological, psychological and social.

UNIT –II- Nutrients

Functions, dietary source and Recommended Dietary allowances (RDA)

1. Carbohydrates, lipids, and proteins.
2. Fat soluble vitamins- A, D,E and K
3. Water soluble vitamins – thiamine, riboflavin, niacin, pyridoxine, folate, vitamin B12, and vitamin C.
4. Minerals- calcium, iron and iodine

UNIT –III- Food Groups

Selection, nutritional contribution and changes during cooking of the following food groups:-

1. Cereals
2. Pulses
3. Fruits and vegetables
4. Milk and milk product
5. Eggs
6. Meat, poultry and fish
7. Fats and oils

UNIT –IV Methods of Cooking and preventing nutrient losses

1. Dry, moist, frying and microwave cooking
2. Advantages, disadvantages and the effect of various method of cooking on nutrients
3. Minimizing nutrient losses

References:

- Bamji MS, Krishnaswany K, Brahma GNV(2009). Textbook of Human Nutrition, 3rd Edition.Oxford and IBH Publishing Co. Pvt.Ltd.
- Srilakshmi (2010). Food Science, 5th Edition. New Age International Ltd.
- Raina 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.
- Wardlaw and Insel MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition. Mosby.

Sessional :

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.
    - Pluses : Whole, dehusked
    - Vegetables: curries, dry preparations
    - Milk and milk products: Kheer, custard
    - Meat, fish and poultry preparations
    - Egg preparations: Boiled, poached, fried, scrambled, omelet, egg pudding
    - Soups: Broth, plain and cream soups
    - Baked Products : Biscuits, cookies, cream cakes, sponge cake preparations, tarts and pies.
    - Snacks: pakoras, cutlets, samosa, upma, poha, sandwiches
    - Salad: Salads and salad dressings
    - Preserved Foods

Course Outcomes

This course will enable the students:

CO-1: To understand about the concepts of food and nutrition.
CO-2: To acquire knowledge about the function, dietary source and Recommended dietary allowances for macro and micro nutrients.
CO-3: To develop the knowledge about the nutrient losses in cooking and methods of enhancing the nutritional quality of foods.

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	1	2	2	2	1	2	3
CO2	2	2	2	1	2	2	1	1	2
CO3	2	1	2	2	2	1	2	2	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper: C 4

Development Communication

M.A. (Home Science) I Semester

B.A. (H.Sc.) VII Semester

Instruction hours/week-4 Max Marks- 100
Course Type- CIE- 25
Theory Major UE- 75
Credit- 4

Course Objectives --

The course will enable the students to understand the different approaches, issues pattern and perspective for development communication in India.

Course Outcomes:

The course will enable the students to -

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

UNITS	COURSE AND DETAILS	PERIODS
1.	CONCEPTS 1) Definition, nature, role and significance of development and development communication. 2) Interrelation between development and development communication. 3) Global and historical perspectives of development communication.	 2 2 2
II.	Models of Development Communication 1) Interdependent Model 2) Dependency Model 3) Basic Need Model	 2 2 2
III	Development Communication projects and experiments 1) Traditional Media experiments. 2) Modern Media experiments – SITE, JDCP & PEARL 3) New Media experiments – GYANDOOT, CYBER EXPERIMENTS.	 3 3 2
IV	Strategies for Message design in Development Communication	

	1) Need Assessment 2) Role of communication and audience in message design. 3) Assessment of Resources and choosing the Media. 4) Defining content & form of Message 5) Designing & implementing the communication 6) Evaluation of communication	 2 2 2 2 2 2

References:

1. Singh, Kartar (1999), Rural Development Principles, Policies and Management, Sage Publications India Pvt. Ltd., New Delhi.
2. Mudy, B (1992) Designing Messages with audience participation, Sage, New Delhi.
3. Naenla, U (1994) Development Communication, Maranand, New Delhi.
4. Kotler, Roberts, Lee (2002) Social Marketing, Improving Quality of life, 2nd Edition, Sage, Thousands Oabs.
5. Servaes, Jacobson and White (1996) Participatory communication for social change, sage, New Delhi.

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.

Course Outcomes: -

The course will enable the students to -

CO-1: Make students understand the role of communication in development.

CO-2: Get acquainted with the approaches, issues, patterns and perspective for development communication in India

Abbreviation:

CIE- Continuous Internal Evaluation.
UE – University Examination.

Course Mapping

	PO1	PO2	PO3	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	2	2	2	1	2	2	1	2	2
CO2	2	2	2	2	1	1	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper: C 5

M.A. (Home Science) I Semester/

B.A. (H.Sc.) VII Semester

Internship

Course Type: Practical Major
Credits: 4
Teaching Periods: 4/ week

CIE – 25 Marks
UE – 75 Marks

Course Objective:

This course will enable students to get an opportunity for exposure to the functioning of the specific agency.

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 student.

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 institutions and dept. of mass communication and journalism, advertising agencies and old age homes and hospitals.

Evaluation / Assessment of students performance may be done on following point -

a. Regularity and punctuality in attendance
b. Ability to work in the team.
c. Ability to be sensitive to the client.
d. Initiative to organize specific programme.
e. Proper record maintenance
f. Oral presentation

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

Course Outcome:

CO-1: Students will be able to understand about various setting in community.

CO-2: Students will be able to get acquainted with community projects.

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	2	3	3	1	2	3	3
CO2	2	2	2	3	3	1	2	3	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper: C 6

M.A. (Home Science) I Semester

Minor

(Other Faculty) As per the University List

ALI101: Introducing Language Sciences

Course Objective:

The course introduces students to the basics of Linguistics. It quashes many myths about language and gives a fair idea of the areas that modern linguistics addresses to.

Unit I. Introduction to Language and Linguistics, Descriptive vs Prescriptive, Tradition, Design Features of Human Language The Origin of Speech.

Unit II. Building blocks of language: Phonetics & Phonology, Building blocks of language: Morphology , Building blocks of language: Syntax , Building blocks of language: Semantics

Unit III. Structure of Sign Languages, Language in Society, Variation, Indian Multilingualism, Linguistic Diversity, Language Endangerment and Maintenance

UNIT IV. Language Contact, Language Change, Language Universals

Textbook

1. O'Grady, William and John Archibald (ed). 2017. Contemporary Linguistics: An Introduction (7e). New York
2. Fromkin, Victoria, Robert Rodman and Nina Hyams. 2014. An Introduction to Language (10e). Singapore: Wadsworth.

Course Outcomes:

At the end of the course students are expected to have:

CO-1: An overview of the field of Language Sciences/Linguistics as it stands today

CO-2: An ability to answer questions like "how many languages do you know", "do you know all the languages", "linguistics of which language" and "what exactly you do in Linguistics" .

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	1	1	2	1	1	2	1	1	1
CO2	1	1	2	1	1	2	1	1	1

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 7

M.A. (Home Science) I Semester/ B.A. (H.Sc.) VII Semester

Research Project

CIE – 25 Marks
UE – 75 Marks

Credits: 4

Course Objectives:

- Demonstrate advanced critical research skills, to establish links between theory and methods within their field of study
- Acquire research skills to develop a research proposal, understand protocol, design and manage a piece of original project work

Course Content:

1. Identification of research problem
2. Preparation and finalization of synopsis

Course outcomes:

CO-1: Help to develop in-depth knowledge of the major subject/field of study, including deeper insight into current research

CO-2: Develop capability to use a holistic view to critically, independently and creatively identify, formulate and deal with research topic

Abbreviations:

CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	3	2	2	1	1	1	3
CO2	2	2	3	1	2	1	1	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Semester VIII

Paper – C 8
Research Methodology
M.A. (Home Science) II Semester
B.A. (H.Sc.) Semester VIII

Course Type: Theory Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 4/Week
Credits: 4

Course Objectives: The course aims to develop an understanding of scope of statistics in ome Science and provide a comprehensive knowledge about statistical measures to analyze data and interpretation of data.

UNIT- I	**Introduction to Research**	**PERIODS**
	1. Meaning, purpose, approaches and scope in various field of Home Science	**2**
	2. Types of Research	**3**
	3. Selection of Research problem: need, relevance and feasibility	**2**
	4. Research Design: meaning, purpose and criteria(Experimental and Observational)	**3**
	5. Quantitative and Qualitative approaches	**2**
UNIT- II	**Research Process**	
	1. Planning the Research	**2**
	2. Defining the Research problem	**2**
	3. Research Objectives: Definition and formulation of hypothesis/objectives	**2**
	4. Review of related literature	**2**
	5. Basics of Sampling: Sampling vs. Complete Enumeration Objectives, Principles and Limitations of sampling, Sampling Techniques, Size and Error	**4**
UNIT-III	**Data Collection Tools and Statistical Methods**	
	1. Primary and Secondary Data, Methods and Tools in Data Collection (Schedule, Questionnaire, Interview, Case Study Method etc.)	**2**
	2. Measurement and Scaling Techniques, Validity, Reliability, Sensitivity of Data Collection Tools	**2**
	3. Processing of Data: Editing, Classification, Coding, Tabulation of Data,	**2**
	4. Statistical Measures (Measures of Central Tendency, Dispersion, and Correlation)	**3**
	5. Test of Significance: t-test, chi-square test	**3**
UNIT- IV	**Report Writing**	

	1. Summary, Conclusion and Recommendations	**3**
	2. Writing References	**2**
	3. Writing Process of Research Report: Formal Style of writing, Preface, Chapterization, Headings, Tables and Figures, Appendices, Bibliography and Acknowledgement	**7**

Sessional

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

References:

1. C. R. Kothari: Research Methodology- Method and Techniques
2. R. Kumar: Research Methodology: A step by Step Guide for Beginners
3. M. H. Gopal: Introduction to Research Methodology for Social Sciences
4. Good, Carter, Scales and Douglas: Methods of Research

Course Outcomes:

This course will enable the students-

CO-1: To understand the role of Statistics in Research.
CO-2: To apply Statistical Techniques to Research Data for analyzing and interpreting data meaningfully.
CO-3: To understand the use of Statistical Software in the analysis of data.

Abbreviations:

CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	3	2	2	1	1	1	3
CO2	2	2	3	1	2	1	1	1	2
CO3	2	2	3	1	2	1	1	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 9
Advanced Food Science
M.A. (Home Science) II Semester
B.A. (H.Sc.) Semester-VIII

Course Type: Theory Major — UE – 75 Marks
Credits: 4 — CIE – 25 Marks
Teaching Periods: 4/Week

Course Objectives

This course aims to provide students with a deeper understanding of various aspects of food science beyond the basics and exploring the process of developing new food products from concept to commercialization. Integrating knowledge of food science, consumer preferences, market trends, and regulatory requirements to innovate and create successful food products.

CONTENTS

UNIT-I	Colloids and Carbohydrates in Food	PERIODS
	1. Introduction to food science.	1
	2. Physical & Chemical properties of foods-Changes occurring on cooking and storages.	2
	3. Colloids – Properties denaturation of proteins, gelatinisation, gel formation, emulsions, foams, browning reactions enzymatic and non-enzymatic.	4
	4. Sugar Cookery: Stages of cookery, fondants, fudges, caramels and brittles, crystallisation of sugar.	2
	5. Starch Cookery: Gelation, factors affecting gelation, starch as thickener, different sources of starch and their properties cereals and millets-their milling and parboiling.	3
UNIT-II	Proteins and Fats in Food	
	1. Protein Cookery (a) Properties of milk protein, other milk products- curds, evaporated, spray dried and condensed milk, Cheese, Khoya, Their use in food preparations. (b) Cereals, grams and dals-Effect of soaking, germination & fermentation on cereals and pulses, properties of gluten, gluten formation and the factors affecting it. (c) Eggs-Properties of egg-proteins & uses in egg preparations, egg as binding, foaming and emulsifying agent mayonnaise preparation. (d) Meat-Postmortem changes, changes on cooking, fish types, changes during heat treatment.	3 3 3 2

	2. Fats & Oils: Properties, smoking points, melting point, hydrogenation, shortening effect. Changes an Storage, rancidity, oxidative and hydrolytic, whipped cream as double emulsion, different commercial products and their uses.	3
UNIT-III	Vegetables & Fruits, Sensory Evaluation	
	1. 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
	2. 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
UNIT-IV	New Product Development	
	a) Food Additives: Definition, importance, classification & uses	2
	b) Leavening agents : Importance, classification, nature & use	2
	c) Food product development: Definition, factors affecting product development and health concerns.	3

References:

1. Charley, H. (1982): Food Science (2nd Edition), John Wiley and Sons, New York.
2. Potter, N. and Hotchkins, J.H. (1996): Food Science, 5th Edition, CBS Publishers and Distributors, New Delhi
3. Belitz, H.D and Geosch , W (1999): Food Chemistry, 2nd Edition, Springer, New York
4. Manay, N.S and ShadarsSharaswamy , M .1987. Food ,Facts and Principles. Wiley Eastern Ltd, New Delhi.
5. Srilakshmi , B.2001. Food Science. New Age International Pvt Ltd. 2nd Edition.
6. Meyer ,L.H.Food Chemistry, Reinhold Book Corporation, New York.

	Sessional
1.	Experience in training for taste perception & thresh holds, hedonic scale for attributes of foods & developing score cards. Triangular tests, duo & trio tests & others.
2.	Standardisation of recipes & methods or reporting recipes.
3.	Experiments on crystallization of sugar & effects of temperature, concentration, acids and other preparation & evaluation of any three preparations. Laddoo, Halwa&GulabJamun.
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.

9	Vegetable & Fruit cooking- Factors affecting colour, texture, flavours, browning reactions & preventive methods.
10.	Fats & Oils – smoking point, absorptions, tests, shortening - effect in food preparations

Course Outcomes

After completing this course, student is expected to learn the following:

CO1:Enabling students to comprehend the changes that occur in the physiochemical properties of food stuffs during food preparation.
CO2:Enabling the students to understand and apply the various techniques in the quality evaluation of foods.
CO3:Imparting awareness on the concept of 'food product development'

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	1	2	2	2	1	2	1
CO2	2	2	2	1	2	2	1	1	2
CO3	2	1	1	2	2	1	2	2	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 10
Theories of Human Development
M.A. (Home Science) II Semester
B.A. (H.Sc.) Semester VIII

Course Type: Theory Major
Credits: 4
Teaching Periods: 4/ week

CIE – 25 Marks
UE – 75 Marks

Course Objectives:

This course will enable the students-

1. To make the students have knowledge of the theories of human development and behavior
   a) To analyse the major contributions of a theorist
   b) Identify and address the major criticisms of a theory
2. To develop in students an appreciation for primary literature
3. To introduce the students to the latest theories of human development and behaviour

UNIT- I	**Overview of Theories**	**PERIODS**
	a. Concepts/ definitions of theories	**1**
	b. Role of theory in advancement of knowledge	**1**
	c. Process of theory development	**2**
	d. Psychoanalytic Perspectives - Freud and the Neo Freudians	
	(i) Psycho analytic theory of Freud	**2**
	(ii) Alfred Adler	**2**
	(iii) Carl Jung	**2**
	(iv) Erick Erickson	**2**
UNIT- II	**Learning Perspective**	
	a. Classical conditioning - Pavlov	**3**
	b. Operant conditioning	**3**
	c. Trial and error – Thorndike	**3**
	d. Bandura and Walters	**3**
UNIT-III	**Cognitive and Moral Perspective**	
	a. Piaget's theory of cognition	**3**
	b. Vygotsky theory	**2**
	c. Information processing theory	**4**
	d. Moral reasoning and development-perspective of Kohlberg and Piaget	**3**

UNIT- IV	**Personality and Contemporary Theories**	
	a. Gordon Allport	**3**
	b. Kurt Lewin	**3**
	c. Urie Bronfenbrenner	**3**
	d. 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:

1. Hall C.S. and Lindzey G. 1978. Theories of Personality (IIIrd Edition). John Wiley and Sons. Toronto.
2. Dicapero S.N. 1974 Personality Theories- Guides to Living. Department of Psychology. John Carroll University.
3. Baldwin A.L. 1967 Theories of Child Development IInd Edition.
4. Ryckman R.M. 1978. Theories of personality, D. Van Nostrand Company, New York.
5. Abramson R.P. 1980 Personality, University of California.
6. Hilgard R.E. 1975 Theories of learning Englewood Chiff. New Jersey.

Course Outcomes:

CO1: Students will be able to understand classical and contemporary theoretical perspectives in Human Development.
CO2: Students will be able to apply theoretical understanding of core concepts in Human development to the everyday context

Abbreviations:

CIE: Continuous Internal Evaluation
UE: University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	3	2	1	2	1	1	1	3
CO2	3	3	2	1	2	1	1	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C11
Traditional Textiles and Apparel Designing
M.A. Home Science II Semester
B.A. (H.Sc.) Semester VIII

Curse Type -Theory Major **CIE : 25**

Credit: 4 **UE: 75**

Objective: To create awareness about the different embroidered textiles of India. To initiate identification of regional embroideries developed by various communities. To understand the origin of technique and design with reference to colours, motifs, layouts of different embroidered textiles.

Unit-I Introduction to Traditional Indian textiles

1. Dacca Muslin 2. ChanderiSarees and muslin

3. Kashmir shawls 4. Brocades of Hyderabad

5. Banaras Brocades 6. Brocades of Gujrat

7. Tie & Dye of Rajasthan and Gujrat

8. Patola of Gujrat, Orissa and Cuttack (Ikat)

9. Kota cotton and zari border sarees of Rajasthan

Unit-II Embroideries of India

1. Chikan Kari of Uttar Pradesh 2. Kasuti of Karnataka

3. Phulkari of Punjab 4. Kashida of Kashmir

5. Kantha of Bengal 6. Embroidery of Kutch and Kathiawar

7. Zari Embroidery 8. Sindhi Embroidery 9. ChambaRumal

10. Manipuri

Unit-III Design Analysis with respect to apparel and textile design

1. Introduction to applied art
   - Elements of Design
   - Principles of Design
2. Designs: Structural, Decorative and abstract designs
3. Fittings- Principles, common fitting problems for different figure type, their rectifications
   - Short figures •Thin figures
   - Large & flat chest• Flat & large hips
   - Broad & narrow shoulders •Long, short & thick neck

Unit-IV

1. Introduction of Apparel Design with respect to Fashion

- Fashion cycle
- Theories of Fashion
- Fashion terminology

2. Family clothing
- Factors affecting family clothing
- Wardrobe planning for the family

3. Techniques in pattern making

- Flat pattern- Drafting - Draping

Books & References Paper-

Traditional Textiles & Apparel designing

1. Agarwal Rajni& Gupta Sanjula :PraidhanNirmanAvam Fashion Designing
2. HenerySapna&PatniManju :ParivarikParidhanVyavastha
3. PatniManju :VastraVigyanAvamParidhanVyasvastha, Star Publication, Agra
4. Singh Vrinda :VastraVigyanAvamParidhan
5. Tumter G.L. : Cutting & Tailoring
6. VermaPramila :VastraVigyanAvamParidhan

Course Outcomes : After completing this course, student is expected to learn the following:

CO-1 Students will develop understanding about ancient and contemporary costumes of India.
CO-2 Students will improve knowledge about the Indian traditional textiles.
CO-3 Students will able to understand the problem, issues and other important conditions of craft men working on traditional textiles of different regions of India.
CO-4 Component to develop a good design through application of elements and principles of design.

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	3	3	3	3	3	3	2	-
CO2	3	3	3	3	3	3	3	2	-
CO3	3	3	3	3	3	3	3	2	-
CO4	3	3	3	3	3	3	3	2	-

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C12

Surface Ornamentation on Textile

M.A. Home Science II Semester

B.A. (H.Sc.) Semester VIII

Curse Type -Practical Major **CIE: 25**

Credit: 4 **UE: 75**

Course Objective: Exploring and applying the old and new ideas of designing in different sector. To beautify the appearance of a fabric or a material. The variety of beautiful clothes and other accessories. The colours we see and the textures we feel are the result of such processes.

Contents

S. N.	Topic	Practical
1. a.	Textile design through dyeing.	6
	- Tie and dye - Batik	
b.	Making an article using each of these.	
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 using each of these'.	10
4.	Usage of traditional and contemporary embroidery techniques for developing an article.	6
5.	Preparation an article using any two 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.	Reports of visits 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.
5. V. A. Shenai (1977), Technology of printing – Technology of Textile processing, Vol. IV, Sevak Publication.
6. M. L. Gulrajari and Deepti Gupta (1990), Natural Dyes and their Application to Textiles" ed. I.I.T. Delhi publication.
7. John and margarat Cannon (1994), Dye plants and Dyeing, The Herbert press (UK)
8. ASTM and ISI Standards.

9. K. Venkatrama (1970) Chemistry of Synthetic Dyes, Part I and II.

Course Outcomes:

After completing this course, student is expected to learn the following:

CO-1: Students will able to develop creative garments for home textiles, interior and other sectors of society.

CO-2: Students will able to develop creative and sustainable fabrics.

CO-3: Students will able to do exploration in terms of designing of different textile material and techniques.

CO-4: Students will be able to use the techniques for developing different products

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	3	3	3	3	3	3	2	-
CO2	3	3	3	3	3	3	3	2	-
CO3	3	3	3	3	3	3	3	2	-
CO4	3	3	3	3	3	3	3	2	-

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 13

Research Project

M.A. Home Science II Semester

B.A. (H.Sc.) Semester VIII

CIE – 25 Marks
UE – 75 Marks

Credits: 4

Course Objectives:

- Demonstrate advanced critical research skills, to establish links between theory and methods within their field of study
- Acquire research skills to develop a research proposal, understand protocol, design and manage a piece of original project work

Course Content:

1. Review of Literature and methodology of the study
2. Finalization of Data collection tool

Course Outcomes:

CO-1: Help to develop in-depth knowledge of the major subject/field of study, including deeper insight into current research
CO-2: Develop capability to use a holistic view to critically, independently and creatively identify, formulate and deal with research topic

Abbreviations:

CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	3	2	2	1	1	1	3
CO2	2	2	3	1	2	1	1	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Semester IX

Paper – C14
Advanced Apparel Designing & Production
M.A (Home Science) III Semester
Semester: IX

Course type: Theory Major **CIE: 25**

Credits: 4 **UE: 75**

Course Objective: To acquaint students, with marketing process so that they can correlate theory with practical aspect of marketing. Understanding the documentation and regulations will helps students in developing and marketing their products.

Contents

Units	Topic	Periods
UNIT I: INTRODUCTION	(a) Target market, Merchandising. (b.) Line and its development.	1 1
UNIT II:APPAREL PRODUCTION	(a) Costing a garment (b) Purchasing of piece goods (c) Production schedule. (d) Garment Assembly (e) Preparation for dispatch	1 1 1 1
UNIT III: TECHNIQUES OF MASS PRODUCTION	(a) Planning of Garment Business, procurement of raw material, organization in an apparel firm. (b) Sampling Department- Importance, objective, types of samples (size set, fit sample, prototype sample, production sample.), Design development and Developing a sample garment (c) Cutting Department-Cutting procedure - fabric laying, marker preparations, sorting, numbering & bundling. (d) Machinery and equipment require for garment production for industrial level cutting, sewing, finishing and embellishment	3 3
UNITIV:PRODUCTION AND QUALITY CONTROL	(a) Production Department- Selection of production system (progressive bundle system, unit production system), modular manufacturing, piece work, production planning.	2

	(b) Finishing and pressing Department- Trimming, packing. (c) Applying Quality control, quality assurance in production processes - fabric cutting, sewing, finishing and packing. .	2 2

Sessional

S. N.	Sessional	Periods
1.	Drafting of personal Blouse pattern and plain sleeve block and construction of simple sari blouse.	8
2.	1. (a)Manipulation of personal block – (i) Relocation of darts by slash and spread method (ii)Converting darts into tucks, (iii) gathers (iv) yokes (v) lines. (b) Construction of three sari blouses 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. (i) Its adaptation to various skirt styles on half scale (ii) 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 - (i) Maternity wear (ii) Feeding mothers (iii) Physically challenged (iv) Old age.	8

References

1. Leanard G. Rubin (1976): The world of fashion, Publication canfield Press, San Fransisco.
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.

Course Outcomes:

CO-1: Students will be able to develop and create patterns for mass and niche market.
CO-2: Students can explore their creativity by learning the concept of pattern making.
CO-3: Students will be able to create garments using different fashion components.
CO-4: Developed understanding about market and retail will help them to develop their career in the same.

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	3	3	3	3	3	3	2	-
CO2	3	3	3	3	3	3	3	2	-
CO3	3	3	3	3	3	3	3	2	-
CO4	3	3	3	3	3	3	3	2	-

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 15
Women Studies
M.A (Home Science) III Semester
Semester IX

Course Type: Theory Major
Credits: 4
Teaching Periods: 4/ week

CIE – 25 Marks
UE – 75 Marks

Course Objectives:

This course aims to impart knowledge to students regarding scope and perspectives to women' studies in cultural context and acquaint them to various important issues regarding women's studies and development.

UNIT- I	**Women Perspectives and Movements- A General Overview**	**PERIODS**
	a. Meaning and scope of women's studies	**2**
	b. Women's perspective and its constituent elements in present social economic and cultural context	**4**
	c. Women's Movement in pre independent and post independent periods and present trends	**4**
	d. Milestones and obstacles in women's Movement in India	**2**
UNIT- II	**Women and the Indian Scenario**	
	a. Feminism, its basic types and their relevance to Indian context. Facts and myths of feminism.	**2**
	b. Importance of women's participation in economics, educational, social and political development.	**6**
	c. Gender role and sex role stereotypes. changes in educational, economic, social and familial status of women	**4**
UNIT-III	**Women Challenges and Issues**	
	a. Population statistics and sex ratio	**2**
	b. Working women and challenges - problems of working women in unorganized sector	**3**
	c. Issues 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**	
	a. A critique of laws for women	**4**
	b. Women and mass media	**2**

	c. Women's health and family planning, health indicators	**2**
	d. National Women's Commission and State Commission for Women and their role in women studies and policy issues	**4**

Sessional Work

a) Observational visits to women's organization
b) Planning and organizing awareness campaigns on vital women's issues
c) Portrayal of women in mass media-newspapers, magazines, television, movies.
   - Critical analysis
d) 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.

Course Outcomes:

CO-1: The student's gains knowledge on comprehensive profile of the health status of women in various life stages and knowledge about attitudes, behavior and health needs of women, laws to protect women's health in the society.

CO-2: The student acquires the knowledge on women education, history of women development and current status of women.

Abbreviations:

CIE: Continuous Internal Evaluation
UE: University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	1	1	2	1	1	1	3
CO2	2	2	2	1	2	1	1	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 16
Applied Nutrition-Health and Fitness
M.A (Home Science) III Semester/

Semester IX

Course Type: Theory Major
Credits: 4
Teaching Periods: 4/ week

CIE – 25 Marks
UE – 75

Course Objectives:

The course equips students with the knowledge and skills necessary to promote health, enhance fitness, and optimize nutrition for individuals and communities.

CONTENTS

UNIT -I	ANTIOXIDANTS IN HEALTH & DISEASE	PERIODS
	1.Effect of oxidants on Macromolecules- Carbohydrates, proteins, lipids , nucleic acids.	3
	2.Nutrient antioxidants with potent health effects	2
	3. Non- Nutritive food components with potential effects (Flavonoids-polyphenols and tannates, phytoestrogens, cyanogenic compounds)	2
	4. Pre and Probiotics	2
	5. Foetal origin of Non-communicable disease	1
	6.Nutrigenomics- the future of Nutrition care for health management, treatment and prevention of diseases.	2
UNIT-II	**GERIATRIC NUTRITION- MULTIFACETED ASPECT OF AGEING**	
	1.Ageing process- changing demographic trends, theories of ageing	3
	2.The ageing process- physiological, biochemical and body composition changes	3
	3.Health and Nutritional problems of the elderly	2
	4. Nutritional requirements and dietary guidelines	2
	5. Community geriatrics- Dimensions, issues and solutions.	2
UNIT-III	**NUTRITIONAL MANAGEMENT- HEALTH & FITNESS**	
	1.Definitions, components and assessment criteria of- - Specific fitness - Health status	2
	2. Holistic approach to management of fitness and health - energy input and output - diet and exercise - effect of specific nutrients on work performance and physical fitness - nutrition, exercise, physical fitness and health inter-relationships	 1 1 3 3
	3. Alternative systems for health and fitness like Ayurveda, yoga, meditation, vegetarianism and traditional diets.	2
UNIT- IV	**NUTRITION IN SPORTS**	
	1.Physiological aspects- Metabolic changes during sports activity	2

	2.Energy systems for endurance and power activity	2
	3.Fuels for muscle contraction, Nutritional requirements for sports: Pre game, during and post game meal (Short-duration, endurance)	4
	4. Water & Electrolyte balance and replenishments	2
	5.Erogogenic aids, sports drink, uses and abuse of dietary supplements	2

References:

1. Shils ME, Olson JA and Shike N (1994). Modern Nutrition in Health & Disease. 8th 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. 4thEditiion. 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.
6. Hickson JH (2000). Nutrition for exercise & sport. CRC Press. 2nd Edition.
7. Mahan, L.K and Escott Stump .S. (2008). Krause's Food & Nutrition Therapy.12th Ed. Saunders-Elsevier.
8. Ira Wolinsky (Ed.). Nutrition in Exercise & Sports.3rd Edition.

Journals:

1. Medicine and Science in sports in exercise
2. International Journal of Sports Nutrition
3. Journal of Applied Nutrition

	Sessional
1.	Market Survey for commercial nutritional products for physical fitness & sports performance available in India
2.	Ayurveda Cooking
3.	Yoga and Pranayaam
4.	Vegetarian , Vegan and traditional Diets
5.	Diet for different sports activities- Endurance & power

Course Outcomes:

After completing this course, student is expected to learn the following:

CO1:To understand about the functional benefits of foods for health and fitness.

CO2:To understand the dietary management of geriatrics

CO3:To understand the physiological and nutritional demands during different sports activities.

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	1	2	2	3	2	2
CO2	2	2	1	2	2	1	2	2	1
CO3	2	2	1	2	1	2	2	2	1

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100%=3

Paper: C 17

Sustainable Development

M.A (Home Science) III Semester/

IX Semester

Instruction hours/week-4 Max Marks- 100
Course Type- CIE- 25
Theory Major UE- 75
Credit- 4

- **Course Objective:** The students will able to Understand the relationship between environmentally sound technologies and sustainability. .

UNIT	COURSE DETAILS	PERIODS
1	1. Sustainability – meaning, concept and implications for development. Sustainable development – concept, philosophy, goals and challenges. 2. Dimensions of sustainable development 3. Theories of development 4. Changes in concept of development.	4 3 2 3
2	People's participation and sustainability 1. People's participation – history, concept and controversies, 2. Types and forms in development initiatives. 3. Relationship between participation, learning and sustainability, inter linkages of people's participation for building local knowledge, capacity of people and local institutions	3 3 5
3	community resource perspectives 1.concepts of resources, national and shared resources, ecological (air, water, fuel, flora and fauna) 2. Indicators of environmental unsustainability.	4 3

4	People's initiative and sustainability 1. Ecology and resource conservation – concepts, biodiversity, resource conservation methods, renewable energy and resources 2. Environmentally sound technologies; their impact on sustainable management of resources, adoption pattern. 3. Environment and habitat. Advantages and lacuna in the initiatives of different social structures in sustainable community resource management initiatives	8 5 5

Sessional Work

a. Study of community resources in the selected area.
b. Leadership building
c. Capacity building
d. 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.

Course Outcomes:
This course will enable students to-

CO-1: Understand the concept of sustainability and development.

CO-2: Critically evaluate the inter linkages of people's participation and sustainable development.

CO-3: Understand the community resources and identify the trends in the extent and consequences of utilization.

CO-4: Understand the relationship between environmentally sound technologies and sustainability.

Abbreviation:

CIE- Continuous Internal Evaluation.

UE – University Examination

Course Mapping

	PO1	PO2	PO3	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	2	2	2	1	2	1	1	2	1
CO2	1	1	1	1	1	1	2	1	2
C03	2	2	2	2	1	`1	2	2	3
CO4	2	2	1	2	2	2	2	2	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper- C 18

Computer Application in Designing

M.A (Home Science) III Semester

Semester IX

Course Type: Practical Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 4/Week
Credits: 4

Course Objectives: The Course aims to equip students with the knowledge, skills, and practical experience needed to create innovative and visually compelling designs using digital tools, prepare them for careers in various design fields, and adap
t to the evolving demands of the design industry

Practical:

S.No.	Topics	No. of Classes
1.	Use of computer peripherals	
	Scanner	2
	Printer	
	Storage device	2
		2
2.	Use of designing software	
	Power point	3
	Coral draw	
	Photo Shop	7
	Page Maker	
		4
		4

3.	Planning and preparation of communication material for rural women related to agriculture/ home science Slides Leaflet/Folder Booklet/flip Book Cover page of different publications	 4 4 6 2
4.	Field testing of developed communication material	2
5.	Evaluation of the developed material	2
	Total	**44**

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

Course Outcomes:

This course will enable the students-

CO-1: To enable students to learn /acquaint the CAD based application.

CO-2: To understand the work of computers while designing.

CO-3: To develop creativity in designing A.V.Aids.

Abbreviations:
CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	1	2	2	1	2	2	2	1	3
CO2	1	2	2	1	2	2	2	1	2
CO3	1	2	2	1	2	2	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 19

Research Project

M.A (Home Science) III Semester

Semester IX

CIE – 25 Marks
UE – 75 Marks

Credits: 4

Course Objectives:

- Demonstrate advanced critical research skills, to establish links between theory and methods within their field of study
- Acquire research skills to develop a research proposal, understand protocol, design and manage a piece of original project work

Course Outcomes:

CO-1: Help to develop in-depth knowledge of the major subject/field of study, including deeper insight into current research
CO-2: Develop capability to use a holistic view to critically, independently and creatively identify, formulate and deal with research topic

Course Content:

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

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	2	1	2	1	2	1	3
CO2	2	2	2	1	2	1	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Semester X

Paper – C 20

Ergonomics

M.A (Home Science) IV Semester/ Semester X

Course Type: Theory Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 4/Week
Credits: 4

Course Objectives

This course will enable the students:

- To become aware of the components of worker in ergonomics in home.
- To understand the working posture and motion.
- To know application of ergonomic consideration in designing of work place.

Unit – I	Essentials of Ergonomics	Periods
	(a) Definition, Scope of Ergonomics in home. (b) Need and importance of Ergonomics. (c) Components of worker input- Affective, Cognitive, Temporal, Physical.	4 4 4
Unit – II	**Work and Work Environment**	
	(a) Work component- content of job, analysis of work and amount of house hold work. (b) Knowledge of various environmental factors and their effect- Heat, Noise, Vibration, Light and Atmospheric Pollution.	6 6
Unit – III	**Anthropometry and Biomechanics**	
	(a) Definition of Anthropometry,Anthropometric consideration and	

	principles. (b) 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. (c) Body mechanics: Definitions, Principles, Height of work surfaces.	4 6 4
Unit- IV	**Work place: The Kitchen**	
	(a) Workers consideration in work space design. (b) Functional design of work place. (c) Work centers. (d) Component of work place.	3 3 3 3

SESSIONAL WORK

a. Survey on different types of work center.
b. Identifying anthropometric measures and types of posture during work in the kitchen.
c. 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

Course Outcomes :

After completing this course, student is expected to learn the following:

CO1: Ability to understand the Definition, Scope of Ergonomics in home.

CO2: Gain knowledge of Anthropometry and Biomechanics

CO3: Understand the concept of Functional design of work place.

Abbreviations:

CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping :

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	3	2	2	3	2	3	2	1
CO2	3	3	3	2	2	2	2	2	2
CO3	3	3	3	2	3	2	3	3	3

Matching: ‘0to 30% = 1: ‘30% to 60% = 2: ‘60% to 100% = 3

Paper – C 21
Study of Family and Society
M.A (Home Science) IV Semester/ Semester X

Course Type: Theory Major
Credits: 4
Teaching Periods: 4/ week

CIE – 25 Marks
UE – 75 Marks

Course Objectives:

This course aims-

- To understand family as a component of socio-cultural milieu and context.
- To familiarize student with developmental perspectives in family life cycle.
- To provide knowledge about family disorganization, family and societal changes and their influences.

UNIT- I	**The Family in Social Context**	**PERIODS**
	a. The family as a component of social system i. Family as an evolving and dynamic institution ii. Functions of Family	**6**
	b. Types of family- Nuclear, Joint, Extended, Alternate families (Single parent, Female headed families, DINK families, adopted families and live in families)	**6**
UNIT- II	**Mental Hygiene, Family Disorganization and Legislatives**	
	a. Mental health, meaning and movement, its importance in family life	**3**
	b. Family counseling process	**3**
	c. Divorced and separated families, legislations pertaining to marriage, property and adoption	**6**
UNIT-III	**Contemporary Issues and Concerns**	
	a. Dowry	**3**
	b. Family violence	**3**
	c. Family crises	**3**
	d. Gender and role discrimination	**3**
UNIT- IV	**Family and Societal Changes and their Influences on Family Working**	
	a. Working Women in family	**3**
	b. Family health issues	**3**
	c. Religion and family cohesiveness	**3**

	d. 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.

Course Outcomes:

This course will enable the students-

CO-1: To understand variations in family life patterns.

CO-2: To create awareness regarding philosophy, structure, function, needs and strengths of families with specific reference to the Indian family.

CO-3: To analyze socio-cultural, economic and political forces that shapes family, marriage and kinship.

Abbreviation:

CIE: Continuous Internal Evaluation
UE: University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	2	2	1	2	1	3
CO2	3	2	2	2	2	1	2	1	2
CO3	3	3	2	2	2	1	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper-C 22

Training and Management

M.A (Home Science) IV Semester/

Semester X

Instruction hours/week-4 Max Marks- 100
Course Type CIE- 25
Theory Major UE- 75
Credit- 4

Course objectives: The students will able to design training programmes for development

UNITS	COURSE AND DETAILS	PERIODS
1	1. Concept, need and importance of training. 2. Principles of Adult Learning. 3. Facilitation Skills in Training, Paraphrasing summarizing, question asking. 4. Training Process-phases of training process-Pre-training, training and post-training. 5. Conceptual models of training process-simple elaborated and spiral. 6. Participatory and conventional training.	3 2 3 3 3 3
2	Designing Training Programme: 1. Need Assessment-concept and techniques. 2. Designing overall training schedule	4 5
3	Management of Training Programme 1. Physical arrangements, selection of participants, selection of trainers/resource persons, aids and equipment transportation, finances, monitoring of training. 2. Organizational factors-Working environment, leadership, values, mechanics of change, organizations as socio-technical systems-impact development.	4 4

	3. Developing organizational structures for facilitating micro and macro level interventions for facilitating development.	4
4.	Evaluation of training Issues in evaluation in training, evaluation of learning in terms of gain in knowledge, attitude and skills; measurement of change 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

Course Outcomes:

This Course will enable students-

- **CO-1:** To be aware of the overall goals of designing training programmes for development.
- **CO-2:** To understand the different methodologies of Training.
- **CO-3:** To conceptualize the training process.
- **CO-4:** To develop skills in training programme

Abbreviation:

CIE- Continuous Internal Evaluation.
UE – University Examination.

Course Mapping

	PO1	PO2	PO3	PSO 1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	1	2	2	1	2	2	2	2	-
CO2	1	1	1	1	1	1	2	1	2
C03	2	2	2	2	1	`1	2	2	3
CO4	2	2	2	2	2	2	2	2	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper-C 23
Food Processing and Preservation
M.A (Home Science) IV Semester/

Semester-X

Course Type: Theory Major

UE – 75 Marks
CIE – 25 Marks

Credits: 4
Teaching Periods: 4/ week

Course Objectives:

The course aims to equip students with the knowledge, skills, and practical experience needed to effectively manage food processing operations, ensure food safety and quality, innovate in product development, and contribute to the sustainable and responsible advancement of the food processing industry.

CONTENTS

UNIT- I	FOOD PRESERVATION	PERIODS
	1. Principles underlying food preservation operations :- i) Thermal ii) Refrigeration and freezing iii) Dehydration iv) Radiation	 2 2 1 1
	2. Use of chemical additives, ionizing radiations, pickling and curing in preservation.	4
UNIT -II	**PROCESSING TECHNOLOGY OF FOODS**	
	1. Cereals: Wheat milling process, baking technology, production of bread, barley malting. Rice processing, fractionation, parboiled rice.	4
	2. Fruits & Vegetables: Changes during ripening	2
	3. Canning process of fruits & vegetables	2
	4. Milk and Milk products: Milk processing, separation, standardization, pasteurization, homogenization, ultrahigh sterile milk.	4
	5. Meat & Fish processing : Rigor mortis, ageing, tenderizing, curing, salting, pickling.	2
UNIT-III	**FORTIFICATION AND EXTRUSION TECHNOLOGY**	
	1. Fortification Technology - Objectives - Nutritional significance -Selection of Vehicle -Fortification of salt, cereal products & dairy products	2
	2. Extruded Food: An introduction to extrusion technology	2

UNIT-IV	**PACKAGING TECHNOLOGY, FOOD LABELLING & FOOD LAWS**	
	1. An Introduction to packaging technology - Objectives - Basic packaging materials and their protective qualities - Effect of packaging on the nutritive value of foods	2
	2. FPO and other food laws governing Indian Food Industry	2

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.

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.

Course Outcomes

After completing this course, student is expected to learn the following:

CO1:To understand the principles and processes involved in food processing
CO2:To understand the technological innovations for various food stuffs.
CO3:To gain the knowledge of fortification and extrusion technology.

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	3	2	2	2	2	2	1	2	2
CO2	2	2	2	1	2	2	1	1	2
CO3	2	2	1	2	2	1	2	2	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper- C 24
Food Preservation Techniques
M.A (Home Science) IV Semester/

Semester-X

Course Type: Practical Major

UE – 75 Marks
CIE – 25 Marks

Credits: 4
Teaching Periods: 4/ week

Course Objectives:

The course aims to equip students with the knowledge, skills, and practical experience needed to effectively manage food processing operations, ensure food safety and quality, innovate in product development, and contribute to the sustainable and responsible advancement of the food processing industry.

	PRACTICALS
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

Course Outcomes

After completing this course, student is expected to learn the following:

CO1:To understand the principles and processes involved in food processing

CO2: To understand the technological innovations for various food stuffs.

CO3: To gain the knowledge of fortification and extrusion technology.

Course Mapping:

	PO 1	**PO 2**	**PO 3**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**	**PSO 6**
CO1	**3**	**2**	**2**	**2**	**2**	**2**	**1**	**2**	**2**
CO2	**2**	**2**	**2**	**1**	**2**	**2**	**1**	**1**	**2**
CO3	**2**	**2**	**1**	**2**	**2**	**1**	**2**	**2**	**2**

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 25

Research Project

M.A (Home Science) IV Semester/

Semester X

CIE – 25 Marks
UE – 75 Marks

Credits: 4

Course Objectives:

- Demonstrate advanced critical research skills, to establish links between theory and methods within their field of study
- Acquire research skills to develop a research proposal, understand protocol, design and manage a piece of original project work

Course Content:
Report writing and finalization of Research project

Course Outcomes:

CO-1: Help to develop in-depth knowledge of the major subject/field of study, including deeper insight into current research
CO-2: Develop capability to use a holistic view to critically, independently and creatively identify, formulate and deal with research topic

Course Mapping

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	2	1	2	1	2	1	3
CO2	2	2	2	1	2	1	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

PGDR

(Home Science)

(2022)

Semester XI

PAPER – C1

Thrust Areas of Home Science

PGDR (Home Science)

Semester XI

Course Type: Theory Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 6/Week
Credits: 6

Courses Objective: This course aims to give insight about need of research in home science, thrust areas of home science and funding agencies for research projects.

UNIT- I	**INTRODUCTION TO RESEARCH IN HOME SCIENCE**	**PERIODS**
	Need of research in different fields of Home Science	**6**
	Identification of thrust areas of Home Science	**6**
UNIT- II	**SIGNIFICANCE OF RESEARCH IN HOME SCIENCE**	
	Scope and Significance of Research Conducted in different areas of Home Science	**12**
UNIT- III	**SOURCES AND PRIORITY OF FUNDING AGENCIES FOR PROJECTS AND RESEARCH**	
	Understanding types of Grant and Funding	**4**
	National and international funding agencies (UGC, DST, NIPCED, UNICEF, INSA)	**4**
	Process to get funding for a research project	**4**
UNIT- IV	**RESEARCH APPLICATIONS OF HOME SCIENCE**	
	Research Applications of Home Science in formal and informal institutions	**7**
	Relevance of Home Science in Current Era	**5**

SESSIONAL WORK: Assignments related to the respective units

References:

1. Research Projects and Research proposals. A guide for Students seeking funding by Paul G. Chaplin. Cambridge University Press.
2. Desrosier NW: Elements of Food Technology, Connecticut, USA: AVI publishing co.
3. Principles of Home Science: S.R.Sharma, Vijay Kausik; Anmol Publications PVT. LTD, New Delhi
4. Encyclopedia of Home Science: S. A Srivastava
5. Education and Communication for Development : O. P. Dahama and O.P. Bhatnagar; Oxford & IBH Publishing Co. PVT Ltd. New Delhi
6. Child Development : E. B. Hurlock
7. Human Development: F. P. Rice; Perntice Hall, New Jursey
8. Research Trends in Home Science and Extention: Prakash Singh; Akinik Publications, New Delhi
9. Teaching of Home Science, Seema Yadav; Anmol Publications PVT. LTD. New Delhi

Course Outcomes:

This course will enable the students-

CO-1: To understand the need and significance of Research in different areas Home Science.

CO-2: To know the different funding agencies for Research Projects

CO-3: To gain the knowledge of different Research Applications in various fields of Home Science

Abbreviations:
CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	2	2	2	1	2	1	3
CO2	2	2	2	2	2	1	2	1	2
CO3	2	2	2	2	2	1	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C 2

Essentials of Entrepreneurship

PGDR (Home Science)

Semester XI

Course Type: Theory Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 6/Week
Credits: 6

Course Outcomes:

1. The main aims of the course are to familiarize students with various concepts used in understanding processes involved in entrepreneurship and business formation and development.
2. Understand theories of entrepreneurship and business development

UNIT- I	**Concept of Entrepreneurship**	**PERIODS**
	Definition, Concept of entrepreneurial development, Theory of Entrepreneurial origin, Need for Self Employment	**3**
	Economic empowerment, Gender discrimination from societal perspective, Status of women in India in the last decade	**3**
	Desired qualities in entrepreneurs	**3**
	Development of women entrepreneurs in India	**3**
UNIT- II	**Establishing a Small Scale Enterprise**	
	Environment scanning	**3**
	Enterprise selection, market assessment, enterprise feasibility study, SWOT analysis	**3**
	Resource mobilization finance technology, raw material, site and manpower	**3**
	Costing, Quality control, profitability and future growth	**3**
UNIT-III	**Operating the Small Scale Enterprise**	

	Schemes available for women entrepreneurs	**4**
	Financial management issues in SSE- definition and scope	**4**
	Marketing management issues in SSE- marketing strategies and marketing mix variables	**4**
UNIT- IV	**Project Planning**	
	Planning basic concepts, need, and feasibility	**4**
	Project identification basic goal	**4**
	Monitoring and evaluation	**4**

SESSIONAL WORK

1. Prepare case profiles of any five entrepreneurs in India.
2. Review employment trends of women in the organized and unorganized sectors.
3. Visit small enterprises and prepare report on it.
4. Prepare a project plan for any business.

References:

1. Dr. G.K. Varshney (2019), Fundamentals of Entrepreneurship, Sahitya Bhawan Publication.
2. S A Kumar, S C Poornima, M K Abraham, K Jayshree (2021), Entrepreneurship Development Paperback, New Age International publishers.
3. Charantimath Poornima M.(2018), Entrepreneurship Development and Small Business Enterprises, Third Edition, Pearson Education .
4. Chandra, P. (1992) project preparation, appraisal, budgeting and implementation, Tata Mc graw Hill, New Delhi.
5. Goel, E.B. (1991) project management. Tata Mc graw Hill, New Delhi.

Course Outcomes:

CO-1: Understand the key resources required to develop an existing business such as ideas and finance, launch a new venture, or initiate a business enterprise

CO-2: Be able to state, understand and evaluate the key factors needed to develop a successful business

CO-3: Understand the central role of opportunity recognition and marketing to business development

Abbreviations:

CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping:

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	2	1	2	3	2	1	3
CO2	2	2	2	1	2	3	2	1	2
CO3	2	2	2	1	2	3	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Paper – C3

Research Methodology

PGDR (Home Science)

Semester XI

Course Type: Theory Major

CIE – 25 Marks
UE – 75 Marks

Teaching Periods: 4/Week
Credits: 4

Course Objectives:

This course aims

- To help students in understanding the significance of Research Methodology in Home Science Research,
- To study the types, tools and Methods of Research and develop the ability to construct data appropriate to the Research Design
- To understand the use of Statistical Software in the analysis of data.

UNITS	COURSE AND DETAIL	PERIODS
UNIT- I	**INTRODUCTION TO RESEARCH** Research Methodology, Meaning of Research, Scientific Thinking, Objectives of Research, Types of research- analytical, applied fundamental, quantitative and qualitative, Conceptual and Empirical, Significance of research, Criteria of good research, Basis of selection of the broad areas of research, selection of Institute, selection of research supervisor, Major research centers in India. Ranking Institutions (Criteria and Selection Procedure), Problems encountered by researchers in India.	**12**

UNIT- II	**IDENTIFYING THE RESEARCH PROBLEM** (a) What is research problem, Selection of the problem, Technique involved in defining a problem, Formulation of hypothesis, Meaning and need for research design, Research Designs- Exploratory, Descriptive, Experimental and Historical. Basic principles of research design, Execution of the research. (b) Sampling techniques, pilot study, Qualitative and Quantitative Data, Scaling and Measurement Techniques- Likert, Guttman and Thustone scale, testing of validity and reliability.	**7** **5**
UNIT-III	**DATA GATHERING INSTRUMENTS/ TOOLS AND ANALYSIS OF DATA THROUGH COMPUTER APPLICATIONS** Collection and analysis of data, Data Analysis by using of computer software (Excel, SPSS) - Coding, Tabulation, measures of central tendency, measures of dispersion, correlation, regression and test of significance (Z-Test, t-Test, Chi-Square test, F –test, ANOVA).	**12**
UNIT- IV	**(a) INTERPRETATION AND REPORT WRITING** Meaning of Interpretation, Necessity of interpretation, Techniques and precautions in Interpretation, Significance of report writing, Research papers and reviews, Different steps in writing report, Layout of the research report, precautions of writing research reports, developing a research proposal, Basic knowledge of organizing conferences, symposia, workshop, and exhibitions. **(a) LITERATURE SURVEY** References, Abstraction of a research paper, possible ways of getting oneself abreast of current literature, High rank Journals, Impact Factors, h – factor, Citation Index. **(b) SCIENCE AND ETHICS** Intellectual property and Intellectual property rights, Indian patent system, Research agreement, Ethical theory and applications, Ethical issues in science research and reporting the problem of plagiarism and related issues, International norms and standards.	**4** **4** **4**

SESSIONAL WORK

- Prepare a research plan of any field of Home Science.
- Prepare a Schedule/Questionnaire of the related topic using scaling techniques. Gathering information from pilot survey and make a sample master chart for analysis.

References:

1. Research Methodology, Methods and Techniques. C.R. Kothari, New Age International (P) Limited Publishers.
2. Research Methodology – Deepak Kumar Bhattacharya Excel Books.
3. The Ethics of Science: An Introduction. David B Resnik, Routledge Publisher, USA.
4. Ethical values for Excellence in Education and Science. J.N. Kapur. VishvaPrakashan, New Delhi.
5. OSU Safety Manual 1.01
6. Practical skills in Chemistry, JR Dean, AM Jones, D. Holmes, R. Read, J. Weyers and A. Jones.Pearson Education Ltd. (Prentice Hall).
7. The Student's Guide to Preparing Dissertations and Thesis. London: Kogan.
8. MLA Handbook for writers of research papers, East West Press, New Delhi.
9. Thesis Writing: A manual for Researchers. New Age International Ltd.
10. Write and publish a scientific paper by Robert A. Day Oryse Press.
11. Research Projects and Research proposals. A guide for Students seeking funding by Paul G. Chaplin. Cambridge University Press.
12. Write Mathematics Right: L Radhakrishnan, Narosa.
13. Satarkar, S.V. (2000), Intellectual Property Rights And Copy Right, Ess Ess Publications.

Course Outcomes:

This course will enable the students-

CO-1: To understand the role of Statistics in Research.
CO-2: To apply Statistical Techniques to Research Data for analyzing and interpreting data meaningfully.
CO-3: To be able to appreciate and understand importance of writing scientifically.

Abbreviations:

CIE: Continuous Internal Evaluation **UE:** University Exam

Course Mapping

	PO 1	PO 2	PO 3	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO1	2	2	2	1	2	1	2	1	3
CO2	2	2	2	1	2	1	2	1	2
CO3	2	2	2	1	2	1	2	1	2

Matching: * 0 to 30% = 1; *30% to 60% = 2; * 60% to 100% =3

Research Project

(Qualifying)