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बुन्देलखण्ड विश्वविद्यालय, झाँसी
BUNDELKHAND UNIVERSITY, JHANSI

झाँसी (उ.प्र.) 284128

संदर्भ. BU/Ac/2022/17379-789

दिनांक 30/06/2022

The Minutes of Meeting of BOS

In reference to the BOS of department of
..... / Institute of .. Home Science ..
..... held on 30/06/2022 regarding the
revision of syllabus in tune with CBCS/NEP-2020 and subsequent
approval from Academic Council. This is to certify that the syllabus is
100% revised.

goh'
Registrar
Bundelkhand University
JHANSI

Prabha
HOD/Coordinator
Bundelkhand University
JHANSI

**CURRICULAM
FOR
MASTER'S DEGREE**



2022-2023

**DEPARTMENT OF HOME SCIENCE
BUNDELKHAND UNIVERSITY
JHANSI**

Bundelkhand University, Jhansi
Department of Home Science
Master of Arts in Home Science Programme
Regulations -2020

Applicability

These Regulations shall apply to the Master in Arts in Home Science Programme from the session 2022-23

Minimum Eligibility for Admission:

Any graduate with Home Science, B.A./B.Sc./B.Hsc. (with minimum 45% marks for General category and minimum 40% marks for SC/ST) or without Home Science (Subject (Education, Economics, Psychology, Anthropology and B.Sc. (Bio-Group) with minimum 55% marks) shall be eligible for admission in the Course.

Programme Objectives:

The objective of the Course is to develop responsive and responsible home-makers and skillful, talented, productive citizens of the nation with high potential and professionalism by imparting knowledge in various areas of Home Science and creating suitable attitude for the same. The major objectives are:

- Women empowerment
- Skill development and enhancement
- Capacity building
- Entrepreneurial development
- Student centric and job oriented courses

Program Outcomes:

The Program trains students to:

- Understand basic and advanced theoretical and practical knowledge in 05 branches of Home Science.
- Develop advanced skill in one of the five branches of Home Science.
- Convert knowledge and skill into entrepreneurship models.
- Become responsible citizens with professional attitude.

Specific Programme Outcomes:

The courses focus on skill development and capacity building to empower women to initiate their own enterprise

- Courses aim at equipping the students with necessary proficiencies for a wide variety of career with entrepreneurial skills and placement.
- Practical training/exposure through internship, field visit, project work, expert lectures, demonstration, workshops and seminars
- Specialised courses in sync with industry academic needs.
- Focus on updating with National & Global issues and concerns.

- Emphasis on capacity building and sensitization to help individual, family, society and nation to understand needs, their development, challenges, issues of concern and possible remedies or steps for different stages of life cycle.
- Encouraging innovative and creative ideas for initiating entrepreneurship.
- Curriculum based capacity building through subject wise research methods and scientific writing.

DISCIPLINE 1: Child Development

Course	Outcomes
MHSCC-101: Advance Human Development (Core)	<ul style="list-style-type: none"> • To undertake an advanced study of the stages in human development with special focus on stages from prenatal development to adulthood. • To understand the need for theory of Human Development.
MHSEL301A/B/C: Early Childhood Care and Education (DEC)	<ul style="list-style-type: none"> • To realize the importance of early years
MHSEL302A/B/C: Methods and Materials for Early Childhood Care and Education (DEC)	<ul style="list-style-type: none"> • To study different methods and techniques of understanding Human Development. • To apply the various methods in a practical context
MHSEL401A/B/C: Children with Special Needs (DEC)	<ul style="list-style-type: none"> • To develop competence in understanding the well being of children with special needs
MHSEL402A/B/C: Human Development- Theories and Current Trends (DEC)	<ul style="list-style-type: none"> • To understand and demonstrate the basics of knowledge relating to human development
MHSCC-204: Methods and Techniques of Assessment in Human Development	<ul style="list-style-type: none"> • To understand various techniques for studying human development • To make students aware about scientific methods for analysis of human development

DISCIPLINE II: Food and Nutrition

Course	Outcomes
MHSCC-102: Food Science (Core)	<ul style="list-style-type: none"> • To provide an understanding of composition of various food stuffs. • To familiarize the students with changes occurring during processing and cooking.
MHSCC-201: Advance Nutrition (Core)	<ul style="list-style-type: none"> • To get an insight into interrelationships between various metabolic pathways. • To understand the mechanisms adopted by the human body
MHSIER-301: Dietetics and Therapeutic Nutrition	<ul style="list-style-type: none"> • To know the principles of diet therapy • To understand the modification of normal diet for

(Interdepartmental Course)	therapeutic purposes
MHSEL301A/B/C: Clinical and Therapeutic Nutrition (DEC)	<ul style="list-style-type: none"> To make the students understand the etiology and prevention of various diseases
MHSEL302A/B/C: Community Nutrition (DEC)	<ul style="list-style-type: none"> To be familiar with the common nutritional problems of the community. To get exposure of the schemes to combat malnutrition. To be aware of the health hazards related to food and water
MHSEL401A/B/C: Food Processing and Technology (DEC)	<ul style="list-style-type: none"> Enabling students to various methods for evaluating variety of foods. To understand and use various methods of preservation of food
MHSEL402A/B/C: Institutional Food Administration (DEC)	<ul style="list-style-type: none"> To understand the special characteristics of food service establishment. To learn manpower management techniques.

DISCIPLINE 3: Extension and Communication

Course	Outcomes
MHSCC-103: Extension and Communication Concepts in Community Development (Core)	<ul style="list-style-type: none"> To be aware of the approaches to development. To understand the existing support structure for development efforts. To understand the process of communication in development work
MHSCC-301: Extension Programmes: Design & Evaluation (Core)	<ul style="list-style-type: none"> To understand the process of programme planning in extension. To learn the principles and procedures involved in programme planning, implementation and evaluation.
MHSEL301A/B/C: Communication Technologies in Extension (DEC)	<ul style="list-style-type: none"> To impart knowledge and understanding of various communication systems. To enhance the versatility of the students in the selection and use of media in different socio-cultural environments. To impart skill in preparation of Computer Aided Media messages
MHSEL302A/B/C: Training and Development (DEC)	<ul style="list-style-type: none"> To understand the educational process in development
MHSEL401A/B/C: Gender in Extension and	<ul style="list-style-type: none"> To understand the concept, need, relevance and dimensions of gender empowerment. To get sensitized to gender disparities and problems

Development (DEC)	<p>of women.</p> <ul style="list-style-type: none"> To understand the efforts at different levels for empowering women
MHSEL402A/B/C: Community Health Management (DEC)	<ul style="list-style-type: none"> To understand the concept of health and health indices popularly used. To realize the health problems of the community and the scientific intervention

DISCIPLINE 4: Textiles and Clothing

Course	Outcomes
MHSCC-203: Textile Science (Core)	<ul style="list-style-type: none"> To understand the basics of textile with relation of material and techniques
MHSEL301A/B/C: Textiles Testing and Quality Control (DEC)	<ul style="list-style-type: none"> To understand the quality of textile and procedures involved in quality control
MHSEL302A/B/C: Fabric Ornamentation (DEC)	<ul style="list-style-type: none"> To understand the various techniques and procedures of fabric ornamentation
MHSEL401A/B/C: Advance Apparel Construction (DEC)	<ul style="list-style-type: none"> To study the protocols of selecting suitable fabrics for apparel construction
MHSEL402A/B/C: Textile Management (DEC)	<ul style="list-style-type: none"> To have an insight of current marketing needs in textile industry

DISCIPLINE 5: Family Resource Management

Course	Outcomes
MHSCC-202: Theory of Management (Core)	<ul style="list-style-type: none"> To understand the basic concepts of resource management
MHSCC-302: Ergonomics for Home Science (Core)	<ul style="list-style-type: none"> To study the principles of designing in terms of work efficiency
MHSCC-401: Entrepreneurship Management (Core)	<ul style="list-style-type: none"> To study basics of managing business related to Home Science
MHSEL301A/B/C: Management of Energy and House Hold Equipment (DEC)	<ul style="list-style-type: none"> To understand the concepts of managing energy and house hold equipments for better output
MHSEL302A/B/C: Resource Management (DEC)	<ul style="list-style-type: none"> To comprehend the necessity of sustainable usage of natural resources
MHSEL401A/B/C: Residential Interior Design (DEC)	<ul style="list-style-type: none"> To understand the needs of managing space with relation to needs and efficiency

MHSEL402A/B/C: Consumer Economics (DEC)	<ul style="list-style-type: none"> To comprehend the needs and demands in the local and international markets
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OTHERS: SEC, Practical, Dissertation etc

Course	Outcomes
MHSCC-104: Research Methodology (Core)	<ul style="list-style-type: none"> To understand the research methods specific to Home Science
MHSCC-205: Statistics and Computer Applications (Core)	<ul style="list-style-type: none"> To understand the significance of statistics and research methodology in Home Science
MHSVC-101: Fashion Designing- I (VAC Credited)	<ul style="list-style-type: none"> To understand the basics of fashion and designing through skill enhancement and garment components
MHSVNC-201: Garbh Sanskar (VAC Non-credited)	<ul style="list-style-type: none"> To understand the role of Pre-natal Care To aware students about all stages of pregnancy and related health issues
MHSIN-301: Summer Internship	<ul style="list-style-type: none"> To gain experience through technical training in the field conditions
MHSMT-401: Dissertation	<ul style="list-style-type: none"> To develop analytical understanding and writing skills
MHSCC-105: Practical (Core) MHSCC-206: Practical (Core) MHSIRA-401: Intradepartmental Course (Practical)	<ul style="list-style-type: none"> To learn laboratory based and scientific techniques

- The department track how many of the students who successfully complete the course seek employment or go in for higher studies.
- Continuous assessment provides feedback on the efficacy of the teaching-learning process and learning outcomes of each course. This is in the form of assignments which are a part of the internal assessment as well as additional quizzes, tests and assignments which are periodically given to students.
- As part of the course outcomes of the various papers taught to students during the Masters' program, there is substantial scope of evaluation of opportunities for skill building, enhancement of conceptual understanding, training in research methodology, and experiential and fieldwork learning.
- All students undertake internship in organizations involved in development related activities like in social service, schools, industries and hospitals. They are evaluated

on this by the organization where they went for internship as well as a committee of teachers for their application of learning from across courses.

- Successful completion of courses like seminars and dissertation is also evaluated in a department committee. Every student prepares a research design, carries out fieldwork and writes a dissertation or thesis that is evaluated by external examiners.

LEARNING OUTCOMES:

In contemporary times, Home Scientists promote capacity building of individuals and communities for social and economic empowerment. They train community women and youth from various strata of society for entrepreneurship. Many Home Scientists have done exceptionally well as entrepreneurs themselves. They do not remain job seekers but have also become job creators. They gain and provide employment in research organizations, food and textile industries, dietetic practice, education and child development domains, accreditation of green buildings, strategic planning and communication technologies.

Years of national and international experience in the field has contributed to the wisdom that all the five windows of opportunity that Home Science offers be opened for i.e. Food and Nutrition, Human Development, Resource Management, Extension and Communication and Fabric and Clothing and Textile. In this course, the students will learn the fundamental principles and foundations of all the five areas. They are expected to internalize the principle of a Home Scientist, that is, to give back to the community from which they draw, for sustainable development.

- Understand and appreciate the role of interdisciplinary sciences in the development and well-being of individuals, families and communities
- Understand the sciences and technologies that enhance the quality of life of people
- Acquire professional and entrepreneurial skills for economic empowerment of self in particular, and community in general
- Develop professional skills in food, nutrition, textiles, housing, product making, communication technologies and human development
- Take science from the laboratory to community.

6. COURSE STRUCTURE

The Course Structure of the Master in Arts in Home Science Programme shall be as under:

Course No.	Name of the Course	Credit	Remark
Semester I			
MHSCC-101	Paper-1 Advance Human Development	04	Core Course
MHSCC-102	Paper-2 Food Science	04	Core Course
MHSCC-103	Paper-3 Extension and Communication Concepts in Community Development	04	Core Course
MHSCC-104	Paper-4 Research Methodology	04	Core Course
MHSCC-105	Paper-5 Related to Core Papers(Practical)	04	Core Course
MHSVC-101	Paper-6 Fashion Designing	04	Value added course (Credited)
Semester Total		24	
Semester II			
MHSCC-201	Paper-7 Advance Nutrition	04	Core Course
MHSCC-202	Paper-8 Theory of Management	04	Core Course
MHSCC-203	Paper-9 Textile Science	04	Core Course
MHSCC-204	Paper-10 Methods and techniques of Assessment in Human Development	04	Core Course
MHSCC-205	Paper-11 Statistics and Computer	04	Core Course
MHSCC-206	Paper-12 Related to Core Paper(Practical)	04	Core Course
MHSVNC-201	Paper-13 Garbh Sanskar	00	Value added course(Non Credited)
Semester Total		24	
Semester III			
MHSCC-301	Paper-14 Extension Programs: Design and Evaluation	04	Core Course
MHSCC-302	Paper-15 Ergonomics for Home Science	04	Core Course/ MOOC
Discipline I: Child Development			
MHSEL301A/ B/C	Paper-16 Early Childhood Care and Education	04	Elective
MHSEL302A/ B/C	Paper-17 Methods and Materials for Early	04	Elective

	Childhood Care and Education		
Discipline II: Food and Nutrition			
MHSEL301A/ B/C	Paper-16 Clinical and Therapeutic Nutrition	04	Elective
MHSEL302A/ B/C	Paper-17 Community Nutrition	04	Elective
Discipline III: Extension and Communication			
MHSEL- 301A/B/C	Paper-16 Communication Technologies in Extension	04	Elective
MHSEL- 302A/B/C	Paper-17 Training and Development	04	Elective
Discipline IV: Textile and Clothing			
MHSEL301A/ B/C	Paper-16 Textile Testing and Quality Control	04	Elective
MHSEL- 302A/B/C	Paper-17 Fabric Ornamentation	04	Elective
Discipline V: Family Resource Management			
MHSEL- 301A/B/C	Paper-16 Management of Energy and Household Equipment	04	Elective
MHSEL- 302A/B/C	Paper-17 Resource Management	04	Elective
MHSIN-301	Paper -18 Summer Internship	04	Summer Internship
MHSIER-301	Paper -19 Dietetics and Therapeutic Nutrition	04	Interdepartmental Course
	Semester Total	24	
	Semester IV		
MHSCC-401	Paper -20 Entrepreneurship Management	04	Core Course
Discipline I: Child Development			
MHSEL401A/ B/C	Paper -21 Children with Special Needs	04	Elective
MHSEL402A/ B/C	Paper -22 Human Development: Theories and Current Trends	04	Elective
Discipline II: Food and Nutrition			
MHSEL401A/ B/C	Paper -21 Food Processing and Technology	04	Elective
MHSEL402A/ B/C	Paper -22 Institutional Food Administration	04	Elective
Discipline III: Extension and Communication			

MHSEL401A/ B/C	Paper -21 Gender in Extension and Development	04	Elective
MHSEL402A/ B/C	Paper -22 Community Health Management	04	Elective
Discipline IV: Textile and Clothing			
MHSEL401A/ B/C	Paper -21 Advance Apparel Construction	04	Elective
MHSEL402A/ B/C	Paper -22 Textile management	04	Elective
Discipline V: Family Resource Management			
MHSEL401A/ B/C	Paper -21 Residential Interior Designing	04	Elective
MHSEL402A/ B/C	Paper -22 Consumer Economics	04	Elective
MHSMT-401	Paper -23 Dissertation From Elective Discipline	08	Master Thesis
MHSIRA-401	Paper -24 Intradepartmental Course (Practical)	04	Intradepartmental Course
	Semester Total	24	
	GRAND TOTAL	96	

M.A. Home Science – Subject; MHSCC – Core Course ; MHSVC – Value added course (Credited) ; MHSVNC - Value added course (Non Credited); MHSEL –Elective; MHSIER – Interdepartmental Course ; MHSIRA – Intradepartmental Course

Master of Arts in Home Science Programme in Brief

Title	The title of the Course shall be Master of Arts in Home Science
Objective	The objective of the Course is to develop responsive and responsible home-makers and skillful, talented, productive citizens of the nation with high potential and professionalism by imparting knowledge in various areas of Home Science and creating suitable attitude for the same.
Duration	The total duration of the Course shall be of two years, spread in four semesters.
Seats	The total number of students to be admitted in the Course shall be 60 in one section.
Eligibility	Any graduate with Home Science, B.A./B.Sc./B.Hsc. (with minimum 45% marks for General category and minimum 40% marks for SC/ST) or without Home Science (Subject (Education, Economics, Psychology, Anthropology and B.Sc. (Bio-Group) with minimum 55% marks) shall be eligible for admission in the Course.
Admission Policy	Admissions shall be made on the basis of University norms. Reservation policy as per rules of Bundelkhand University, Jhansi will be followed.
Course Content	<p>The two year P.G. Course of Home Science is divided into four semesters i.e. two each in M.A. (Prev.) and M.A. (Final). During these four semesters, knowledge enhancement of the students will be done through:</p> <ul style="list-style-type: none">• 14 (Fourteen) Core Courses / MOOC of 04 credit each (from five disciplines i.e. Child Development, Food and Nutrition, Extension and Communication, Textile and Clothing, Family Resource Management along with Research Methodology) [14 x 4 = 56 Credits]• 04 (Four) Discipline Elective Courses of 04 credit each (to be selected from any one of the aforesaid five disciplines) [04 x 04 = 16 Credits]• 02 (two) Value Added Course (01 Credited + 01 Non-credited) of 04 credit each (from Fashion Designing) [01 x 04 = 04 Credits]• 01 (one) Inter-Departmental Course of 04 credits [01 x 04 = 04 Credits]• 01 (one) Internship of 04 credit (on any relevant Topic/Discipline) [01 x 04 = 04 Credits]• 01 (one) Dissertation of 08 credit (on a Topic based on one of the Elective disciplines adopted by the student) [01 x 08 = 08 Credits]• 01 (one) Intradepartmental Course (Practical based on Elective Discipline) of 04 credit [01 x 04 = 04 Credits]
Distribution of Marks	<ul style="list-style-type: none">• There theory papers will be each of 100 marks (70 marks for Written Examination + 30 marks for Internal Assessment) for each theory paper• Practical work including Viva-Voce will be of 100 marks including 30 marks for Internal Assessment.• Dissertation will be of 200 marks

The details of the semester wise courses offered in each discipline are as under:

SEMESTER- I: (05 Core with 01 Practical + 01 VAC)

Paper 1 (Core): MHSCC-101: Advance Human Development

Paper 2 (Core) : MHSCC-102 : Food Science

Paper 3 (Core): MHSCC-103: Extension and Communication Concepts in
Community Development

Paper 4 (Core): MHSCC-104: Research Methodology

Paper 5 (Core Practical): MHSCC105: Related to Core Papers

Paper 6 (Value added): MHSVC-101: Fashion Designing

SEMESTER- II: (06 Core with 01Practical+ 01 VAC-NC)

Paper 7 (Core): MHSCC-201: Advance Nutrition

Paper 8 (Core): MHSC-202: Theory of Management

Paper 9 (Core): MHSC2-03: Textile Science

Paper 10 (Core): MHSC-204: Methods and Techniques of Assessment in Human Development

Paper 11 (Core): MHSCC-205: Statistics and Computer Applications

Paper 12 (Core Practical): MHSCC-206: Related to Core Papers

Paper 13 (Value added): MHSVNC201: Garbh Sanskar

SEMESTER- III: (02 Core / 01 MOOC + 02 Elective +01 Summer Internship+01Interdepartmental Course)

Paper 14 (Core): MHSCC-301 : Extension Programmes: Design and Evaluation

Paper 15 (Core): MHSCC-302: Ergonomics for Home Science/MOOC

Discipline I: Child Development

Paper 16 (Elective): MHSEL301A/B/C: Early Childhood Care and Education

Paper 17 (Elective): MHSEL302A/B/C: Methods and materials for early childhood Care and education

Discipline II: Food and Nutrition

Paper 16 (Elective): MHSEL301A/B/C: Clinical and Therapeutic Nutrition

Paper 17 (Elective): MHSEL302A/B/C: Community Nutrition

Discipline III: Extension and Communication

Paper 16 (Elective): MHSEL301A/B/C: Communication Technologies in Extension

Paper 17 (Elective): MHSEL302A/B/C: Training and Development

Discipline IV: Textile and Clothing

Paper 16 (Elective): MHSEL301A/B/C: Textile Testing and Quality Control

Paper 17 (Elective): MHSEL302A/B/C: Fabric Ornamentation

Discipline V: Family Resource Management

Paper 16 (Elective): MHSEL301A/B/C: Management of Energy and Household Equipment

Paper 17 (Elective): MHSEL302A/B/C: Resource Management

Paper 18 (Summer Internship): MHSIN-301: summer Internship

Paper 19 (Interdepartmental Course): MHSIER-301: Dietetics and Therapeutic Nutrition

SEMESTER- IV: (01 Core + 02 Discipline Elective + 01 Practical + 01 Dissertation)

Paper 20 (Core): MHScc401: Entrepreneurship Management

Discipline I: Child Development

Paper 21 (Elective): MHSEL401A/B/C: Children with Special Needs

Paper 22 (Elective): MHSEL402A/B/C: Human Development: Theories and Current Trends

Discipline II: Food and Nutrition

Paper 21 (Elective): MHSEL401A/B/C: Food Processing and Technology

Paper 22 (Elective): MHSEL402A/B/C: Institutional Food Administration

Discipline III: Extension and Communication

Paper 21 (Elective): MHSEL301A/B/C: Gender in Extension and Development

Paper 22 (Elective): MHSEL301A/B/C: Community Health Management

Discipline IV: Textile and Clothing

Paper 21 (Elective): MHSEL301A/B/C: Advance Apparel Construction

Paper 22 (Elective): MHSEL301A/B/C: Textile Management

Discipline V: Family Resource Management

Paper 21 (Elective): MHSEL301A/B/C: Residential Interior Designing

Paper 22 (Elective): MHSEL301A/B/C: Consumer Economics

Paper 23 (Dissertation): MHSMT-401: Dissertation (from Elected Discipline)

Paper 24 (Intradepartmental): MHSIRA-401: Practical

Table for Courses offered for M.A. (Home Science)

I	II
M.A. (Home Science) Prev. Semester 1	M.A. (Home Science) Prev. Semester II
05 Core with 01 Practical + 01 VC	06 Core with 01 Practical+ 01 VNC
<p>Paper 1 (Core): MHSCC-101: Advance Human Development</p> <p>Paper 2 (Core) : MHSCC-102 : Food Science</p> <p>Paper 3 (Core): MHSCC-103: Extension and Communication Concepts in Community Development</p> <p>Paper 4 (Core): MHSCC-104: Research Methodology</p> <p>Paper 5 (Core Practical): MHSCC105: Related to Core Papers</p> <p>Paper 6 (Value added): MHSVC-101: Fashion Designing</p>	<p>Paper 7 (Core): MHSCC-201: Advance Nutrition</p> <p>Paper 8 (Core): MHSC-202: Theory of Management</p> <p>Paper 9 (Core): MHSC2-03: Textile Science</p> <p>Paper 10 (Core): MHSC-204: Methods and Techniques of Assessment in Human Development</p> <p>Paper 11 (Core): MHSCC-205 : Statistics and Computer Applications</p> <p>Paper 12 (Core Practical): MHSCC-206: Related to Core Papers</p> <p>Paper 13 (Value added): MHSVNC 201: Garbh Sanskar</p>
III	IV
M.A. (Home Science) Semester III	M.A. (Home Science) Semester IV
02 Core / 01 MOOC + 02 Elective +01 Summer Internship+01 Interdepartmental Course)	01 Core + 02 DEC + 01 Practical + 01 Dissertation
<p>Paper 14 (Core): MHSCC-301 : Extension Programmes: Design and Evaluation</p> <p>Paper 15 (Core): MHSCC-302: Ergonomics for Home Science/MOOC</p> <p>Discipline I: Child Development</p> <p>Paper 16 (Elective): MHSEL301A/B/C: Early Childhood Care and Education</p> <p>Paper 17 (Elective): MHSEL302A/B/C: Methods and materials for early childhood Care and education</p> <p>Discipline II: Food and Nutrition</p> <p>Paper 16 (Elective): MHSEL301A/B/C: Clinical and Therapeutic Nutrition</p> <p>Paper 17 (Elective): MHSEL302A/B/C: Community Nutrition</p> <p>Discipline III: Extension and Communication</p> <p>Paper 16 (Elective): MHSEL301A/B/C: Communication Technologies in Extension</p>	<p>Paper 20 (Core): MHSCC401: Entrepreneurship Management</p> <p>Discipline I: Child Development</p> <p>Paper 21 (Elective): MHSEL401A/B/C: Children with Special Needs</p> <p>Paper 22 (Elective): MHSEL402A/B/C: Human Development: Theories and Current Trends</p> <p>Discipline II: Food and Nutrition</p> <p>Paper 21 (Elective): MHSEL401A/B/C: Food Processing and Technology</p> <p>Paper 22 (Elective): MHSEL402A/B/C: Institutional Food Administration</p> <p>Discipline III: Extension and Communication</p> <p>Paper 21 (Elective): MHSEL301A/B/C: Gender in Extension and Development</p>

<p>Paper 17 (Elective): MHSEL302A/B/C: Training and Development</p> <p><i>Discipline IV: Textile and Clothing</i></p> <p>Paper III (DEC): TC-02: Textile Testing and Quality Control</p> <p>Paper IV (DEC): TC-03: Fabric Ornamentation</p> <p><i>Discipline V: Family Resource Management</i></p> <p>Paper 16 (Elective): MHSEL301A/B/C: Management of Energy and Household Equipment</p> <p>Paper 17 (Elective): MHSEL302A/B/C: Resource management</p> <p>Paper 18 (Summer Internship): MHSIN-301: summer Internship</p> <p>Paper 19 (Interdepartmental Course): MHSIER-301: Dietetics and Therapeutic Nutrition</p>	<p>Paper-22(Elective):MHSEL301A/B/C:Community Health Management</p> <p><i>Discipline IV: Textile and Clothing</i></p> <p>Paper-21(Elective):MHSEL301A/B/C:Advance Apparel Construction</p> <p>Paper22(Elective):MHSEL301A/B/C:Textile Management</p> <p><i>Discipline V: Family Resource Management</i></p> <p>Paper21(Elective):MHSEL301A/B/C: Residential Interior Designing</p> <p>Paper-22(Elective):MHSEL301A/B/C:Consumer Economics</p> <p>Paper IV (Practical): PRC-04: Related to Discipline Elective Papers</p> <p>Paper 23 (Dissertation): MHSMT-401:Dissertation (from Elected Discipline)</p> <p>Paper 24(Intradepartmental): MHSIRA-401: Practical</p>
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Table for Discipline wise Core, Elective and other Courses offered for M.A. (Home Science)

Discipline – I	Discipline II
Child Development	Food and Nutrition
<p>Core Course:</p> <p>MHSCC-101: Advance Human Development</p> <p>MHSC-204: Methods and Techniques of Assessment in Human Development</p> <p>Discipline Elective Courses (DEC):</p> <p>MHSEL301A/B/C: Early Childhood Care and Education</p> <p>MHSEL302A/B/C: Methods and materials for early childhood Care and education</p> <p>MHSEL401A/B/C: Children with Special Needs</p> <p>MHSEL402A/B/C: Human Development: Theories and Current Trends</p>	<p>Core Course:</p> <p>MHSCC-101:: Food Science</p> <p>MHSCC-201:: Advance Nutrition</p> <p>Discipline Elective Courses (DEC):</p> <p>MHSEL301A/B/C: Clinical and Therapeutic Nutrition</p> <p>MHSEL301A/B/C: Community Nutrition</p> <p>MHSEL401A/B/C: Food Processing and Technology</p> <p>MHSEL401A/B/C: Institutional Food Administration</p> <p>MHSIER-301: Dietetics and Therapeutic Nutrition</p>
Discipline III	Discipline IV
Extension and Communication	Textile and Clothing
<p>Core Course:</p> <p>MHSCC-103: Extension and Communication Concepts</p>	<p>Core Course:</p> <p>TC-01: Textile Science</p>

<p>in Community Development</p> <p>MHSCC-301: Extension Programmes: Design and Evaluation</p> <p>Discipline Elective Courses (DEC):</p> <p>MHSEL301A/B/C: Communication Technologies in Extension</p> <p>MHSEL302A/B/C: Training and Development</p> <p>MHSEL401A/B/C: Gender in Extension and Development</p> <p>MHSEL402A/B/C: Community Health Management</p>	<p>Discipline Elective Courses (DEC):</p> <p>MHSEL301A/B/C: Textile Testing and Quality Control</p> <p>MHSEL301A/B/C: Fabric Ornamentation</p> <p>MHSEL401A/B/C: Advance Apparel Construction</p> <p>MHSEL402A/B/C: Textile Management</p>
<p>Discipline V</p>	<p>Others</p>
<p>Family Resource Management</p>	<p>Practical, Dissertation etc</p>
<p>Core Course:</p> <p>MHSCC-202: Theory of Management</p> <p>MHSCC-302: Ergonomics for Home Science/MOOC</p> <p>MHSCC-401: Entrepreneurship Management</p> <p>Discipline Elective Courses (DEC):</p> <p>MHSEL301A/B/C: Management of Energy and Household Equipment</p> <p>MHSEL302A/B/C: Resource Management</p> <p>MHSEL401A/B/C: Residential Interior Designing</p> <p>MHSEL402A/B/C: Consumer Economics</p>	<p>Core Course:</p> <p>MHSCC-104:Research Methodology</p> <p>MHSCC-205: Statistics and Computer Applications</p> <p>MHSCC-105: Practical Related to Core Papers</p> <p>MHSCC-206: Related to Core Papers</p> <p>Discipline Elective Courses (DEC):</p> <p>Intrdepartmental: MHSIRA-401: Practical Related to Discipline Elective Papers</p> <p>Value added Course:</p> <p>MHSVC-101: Fashion Designing</p> <p>MHSVNC-201: Garbh Sanskar</p> <p>MHSIN-301:Summer Internship: To be selected by the Student</p> <p>MHSMT-401:DISSERTATION: Dissertation (from Elected Discipline)</p>

Discipline, Paper and Unit wise Syllabus

DISCIPLINE 1: Child Development

Course ID	Course (Core)
MHSCC-101	Advance Human Development
Objectives	<ul style="list-style-type: none"> To undertake an advanced study of the stages in human development with special focus on stages from prenatal development to adulthood. To understand the need for theory of Human Development.
Unit-1	Human Development: Concepts, Principles, Growth and Development. Pre-natal period and Birth: Development, genetic and environmental factors affecting prenatal Development, delivery and birth.
Unit-2	Infancy: Physical and perceptual development; Cognitive, social and emotional development. , language development
Unit-3	Early and Middle Childhood: Physical and motor development; Cognitive development; Social and Emotional development, language development
Unit-4	Adolescence : Physical development; Cognitive development; Social and Emotional development, problems during adolescent
Unit-5	Adulthood : Physical, sensory and cognitive changes during adulthood, social and emotional development ,adjustment problems during adulthood
Practical	<ul style="list-style-type: none"> Study of physical, motor, social, emotional, language, intellectual and moral development at different ages and writing interpretative report. Prepare Resource File. Seminar/Presentation on any topic related to Human Development.
References	<ol style="list-style-type: none"> Berk L.E., Child Development, Allyn and Bacon, USA, 2000. Devadas R.P.C. & Jaya N.A.- Textbook on Child Development, McMillan India Ltd. Delhi, 1996. Stuart Clark- Life Span Development. Papalia D.E., Human Development, Tata McGraw Hills Publishing Company 1997. Turner Jeffery.S. & Life Span Development. Harcourt Helms. Donald B. Dehart G.B. & Sroufe. L Alan. Child Development- its Nature and Course. Santrok John W.- Child Development, McGraw Hill. Hughes, Noppe & Nopp (1996). Child Development, Prentice Hall, New Jersey

Course No.	Course (DEC)
MHSCC-204	Methods and techniques of Assessment in Human Development
Objectives	<ul style="list-style-type: none"> To understand various techniques for studying Human Development. To make the students aware about scientific method of analyzing Human Development.
Unit-1	Assessment -definition and function of assessment, Assessment techniques, Approaches to assessment, concept of measurement, Techniques of measurement, Relative efficacy of assessment tools and measuring different aspect of development.
Unit-2	Assessment scales- neonatal scales, infant and toddler assessment scales, Infant- toddler scales, Early childhood assessment _ types, Administration of cognitive test for children.
Unit-3	Administration of personality test for children- New trends in assessment of human behavior, Current challenges in assessment of human behavior, Ethical issue in the assessment of human development.
Unit-4	Scientific method- importance, Criteria- reliability, validity, control, Types and test for reliability and validity, Item analysis- Importance and types, Item analysis procedures.

Unit-5	Principles of developing a test / scale. Standardization procedures. Types of scales – nominal scales – construction rules, Ordinal scales – construction rules, Interval scales, Ratio scales – construction rules.
Practical	<ul style="list-style-type: none"> • Development of test/ scales for assessment.
References	<ol style="list-style-type: none"> 1. Robert M. Kaplan, Dennis P. Saccuzzo, 2005, “Psychological Testing”, Principles, Applications and issues, Wodsworth, U.S.A. 2. Pestonjee D.M. 2003., “Third hand book of psychological and social instruments”. Vol.1, Concept Publishing Company, New Delhi. 3. James Goodwin, 2002 “Research in Psychology”. Methods and design, 3rd edition, John Wiley & Sons, Inc. U.S.A. 4. L.R. Gay. Geoffrey, E. Mills and Peter Airasian, 2000, “Educational research”, Competencies for Analysis and applications, 8th edition, Pearson, Merrill Prentice Hall, New Jersey.

Course ID	Course (DEC)
MHSEL301A/B/C	Early Childhood Care and Education
Objectives	<ul style="list-style-type: none"> • To realize the importance of early years
Unit-1	ECCE: Concepts, objectives, need, scope and significance. Types of Pre-school: Play Centers, Day Care, Montessori, Kindergarten, Balwadi, Aganwadi. ECCE in the National Policy on Education
Unit-2	Contribution of the thinkers in ECCE: Pestalozzi, Rousseau, Froebel, John Dewey, Maria Montessori, M.K. Gandhi and Rabindra Nath Tagore.
Unit-3	ECCE in India: Pre Independence period, Post Independence-Kothari Commission, Contribution of Five Year Plans to ECCE, Yash Pal Committee.
Unit-4	Contribution of the mentioned agencies/ programmes to ECCE in India: ICCW, IAPE, NCERT, ICDS, UNICEF, NCTE, Mobile Crèche etc.
Unit-5	Pre-School Centers: Concept, Administrative set-up, Functions and Organization.
Practical	<ul style="list-style-type: none"> • Visit to Early Childhood Care and Education Centres, recording information and observation and writing report. • Planning ECCE programmes including infra-structural facilities and budget proposals. • Conducting interaction programmes with teachers and parents. • Developing literature for parents preparing & using visual Aids.
References	<ol style="list-style-type: none"> 5. Grewal J.S., 1998. Early Childhood Education - Foundation & Practices, Harprasad Bhargava Edu. Publishers, Agra. 6. Mohanty & Mohanty, 1994. Early Childhood Care and Education, Deep & Deep Pub., New Delhi. 7. Singh B, 1997. Pre-School Education, APH Publishing Corp., New Delhi. 8. Muralidharan R & Banerji V, 1991: A Guide for Nursery School Teacher, NCERT, New Delhi.

Course ID	Course (DEC)
MHSEL302A/B/C	Methods and Materials for Early Childhood Care and Education
Objectives	<ul style="list-style-type: none"> • To study different methods and techniques of understanding Human Development. • To apply the various methods in a practical context
Unit-1	Basic principles and methods of Early Childhood Education Play: Role of Play in development and education in early years; Types of play activities.

	Programme Planning for young children: Principles, goals, objectives, schedule of activities.
Unit-2	Play activities and materials for physical and motor development: Movement and mobility; Gross and fine motor skills; Healthful living; Role of educator Play activities for social and emotional development and for exploring the environment
Unit-3	Play activities for developing Communication- language skills: Importance of communication, promotion of language skills- listening, speaking, reading and writing; Activities for language development: conversation, pre-reading, writing skills, songs and rhymes, storytelling, riddles.
Unit-4	Literature for children: Need and types; Importance of storytelling and techniques of storytelling. Art and creative activities: Significance, types of art activities; Role of teacher in planning the activity, motivating children; Music
Unit-5	Activities to promote mathematical concepts in young children: Development of mathematical concepts; Principles of teaching mathematical concepts Activities to promote Science: Thinking, observing, inferring, classifying, communicating; Concept formation - differentiation, grouping, labeling; Developing scientific outlook and Role of teacher in some important science experiences.
Practical	<ul style="list-style-type: none"> • Developing and conducting activities to promote the development of the child. • Developing theme based projects for children (eg.-science concepts and mathematical concepts) and implementing them in pre-school programmes. • Developing educational and play materials for pre-schoolers using indigenous materials. • Developing picture books/story books and rhymes. • Developing and conducting creative art activities for pre-scholars. • Prepare Resource files for children.
References	<ol style="list-style-type: none"> 1. Grewal, J.S., Early Childhood Education Foundation and Practice, II Ed., Educational Publishers. 2. Singh, Bhoodev, Pre-School Education, Ist Ed. APH Publishing Corporation. 3. Mohanty & Mohanty, Early Childhood Care and Education, Deep & Deep Publications Pvt. Ltd. 4. Swaminathan M. (1998) The first five year. Sage Publications, New Delhi 5. Muralidharan R (1991), A Guide to Nursery School Teachers, NCERT, New Delhi.

Course ID	Course (DEC)
MHSEL401A/B/C	Children with Special Needs
Objectives	<ul style="list-style-type: none"> • To develop competence in understanding the well being of children with special needs
Unit-1	Introduction to Children with Special Need: Definition and terminology; Types of special children; Children at risk- poverty and gender issues; Genetic and environmental factors in disability; Effect of the disability on the child; Early detection, screening identification; Need for intervention, education, rehabilitation; Role of family and child care worker.
Unit-2	Services for Special Children: Prevalence in India; The issues of labeling; Policies and legislation for the disabled; Prevention of the disability; Rehabilitation; Approach towards disability
Unit-3	The Child with mental Retardation: Definition and classification; Causes of mental retardation; Identification; Characteristics; Managing children with mental retardation at home; Special educational measures

	Gifted Children: Definition, characteristics of gifted children, identification, special educational measures, role of parents.
Unit-4	Visually Impaired Children: Definition- Blind and partially sighted children; Identification; Causes; Effect of visual impairment on child's development; Special education & training; Role of family in detection, early stimulation and training Hearing Impaired Children: Definitions - Deaf and hard of hearing children; Classification: Mild, moderate, severe and profound loss; Causes of hearing impairment; Identification, care, early stimulation and education of hearing impaired children; Role of family in detection and child's language development The Children with communication disorders: Definition and meaning; Classification; Causes; Management and education of children with communication disorders.
Unit-5	The Children with Cerebral Palsy and Orthopedic Disability: Definition and classification; Causes and associated conditions; Identification and integrated education; Rehabilitation of children with physical disability; Role of family in care and early training. Children with behavioural Disorders: Definition; General causes; Types; Behavioural problems associated with Autism, Attention Deficit Hyper activity Disorder (ADHD), Enuresis; Behavioural problems of children showing excessive anxiety, phobia, temper-tantrums, withdrawal behaviour and aggressive behaviour.
Practical	<ul style="list-style-type: none"> • Study of etiology, characteristics, diagnosis of children with different disabilities and recording information. • Visit of Centres and Institutions for special children and recording information and observation. • Writing Reports.
References	<ol style="list-style-type: none"> 1. Kirk Samuel, Educating Exceptional Children, TBH, New Delhi. 2. Bhargava M. (1994) - Introduction to Exceptional Children, Sterling Publishers, New Delhi. 3. Kar Chintamani (1996)- Exceptional Children: Their Psychology and Education, Sterling Publishers, New Delhi. 4. Sahu B.K. (1993)- Education of the Exceptional Children, Kalyani Publishers, New Delhi.

Course ID	Course (DEC)
MHSEL402A/B/C	Human Development- Theories and Current Trends
Objectives	<ul style="list-style-type: none"> • To understand and demonstrate the basics of knowledge relating to human development
Unit-1	Early Theories Psychological Theory- Sigmund Freud Psychological Theory- Erik Erikson
Unit-2	Social Learning Theory- Albert Bandura Learning Theories- Pavlov and Skinner
Unit-3	Cognitive Development Theory- Jean Piaget Socio-Cultural Theory of Cognitive Development- Vygotsky
Unit-4	Kohlberg's Moral Judgement Theory Ecological Theory- Vrie Bronfenbrenner
Unit-5	Recent Theoretical Perspectives of Human Development
Practical	<ul style="list-style-type: none"> • Group Discussions: Various Theories of Human Development and Crises Management • Resource file-Collection of element articles, picture, tests about theories theorists, philosopher, thinkers, psychologist, educationists (related to Human Development).
References	<ol style="list-style-type: none"> 1. Hall, G.S. and Lindzey, G.- Theories of Personality.

	<ol style="list-style-type: none"> 2. Johnson, R.C. and Medinnus, G.R.- Child Psychology behaviour and Development. 3. Lowe, C.M.- Value Orientation in Counselling and Psycho-therapy. 4. Cavanaugh, M.E., The Counselling Experience: A Theoretical and Practical Approach, Monterey CA Brooks, Cole,1982. 5. Gelso, Charles J. and Fretz, Bruce R., Counselling Psychology, Prism Book Pvt. Ltd. Bangalore.
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DISCIPLINE II: Food and Nutrition

Course ID	Course (Core)
MHSCC-102	Food Science
Objectives	<ul style="list-style-type: none"> • To provide an understanding of composition of various food stuffs. • To familiarize the students with changes occurring during processing and cooking.
Unit-1	<p>Introduction to Food Science: Constituents of Foods- General, physical and chemical properties; Colloidal systems; gels; emulsions.</p> <p>Enzymes: Importance of enzymes and their application in Food Industry</p>
Unit-2	<p>Cereals and Cereal Products: Types, composition and structure; Functional properties of starch; Wheat starch and Gluten formation; Properties of amylase and amylopectin.</p> <p>Fats and Oils: Types and Sources (Animal and Vegetable); Functional properties and uses in cookery.</p>
Unit-3	<p>Milk and Milk Products: Composition; Uses in cookery; Effects of Heat, Enzymes, Acid and Salts on milk; Shelf Life and storage.</p> <p>Eggs: Structure, composition and grading; Changes during storage; Functional properties; Uses in cookery.</p> <p>Meat, Fish and Poultry: Structure and composition; Post mortem changes.</p>
Unit-4	<p>Pulses and legumes: Composition and structure; Selection and variety; Functional properties of pulses.</p> <p>Vegetables: Composition and classification; Changes occurring during cooking; Pigments and flavour constituents.</p> <p>Fruits: Composition; Changes occurring during maturation and ripening; Post harvest changes; Pigments and flavour constituents.</p>
Unit-5	Sugar Cookery: Stages of sugar cookery
Practical	<ul style="list-style-type: none"> • Sugar Cookery: Stages of sugar cookery. • Fats and Oils: Melting point, Smoke Point. Suitability of different fats as medium for cooking. • Milk and Milk products: Effect of acids, salts, alkali, sugar, heat and enzymes. • Eggs: Methods of egg cookery and effect of heat. • Pulses: Effect of cooking and processing methods. • Fruits and Vegetables: Effects of cooking, metal ions and p^H on pigments.
References	<ol style="list-style-type: none"> 1. Amerine MA, Pengborn RM, Roceasier EB (1965). Principles of Sensory Evaluation and Academic Press, New York. 2. Bealon GH and Begos JM (eds.) (1996), Nutrition in Preventive Medicine WHO. 3. Belitz HD an Grosch W (1999) Food Chemistry Springer Verlag Berlin Heidelberg. 4. Heidelberg. 5. Bamji M.S., Rai PN and Reddy V (eds.) Food Chemistry (2nd edition) Spinger, New York. 6. Anita Singh, Ahar evam poshan vigyan, Star publication, Agra 7.Devina sahai(2019),Ahar Vighyan , New Age International Publisher.

Course ID	Course (Core)
MHSCC-201	Advance Nutrition
Objectives	<ul style="list-style-type: none"> To get an insight into interrelationships between various metabolic pathways. To understand the mechanisms adopted by the human body
Unit-1	<p>Minimal Nutritional Requirements and RDA: Formulation and RDA and Dietary Guidelines; Reference Man and Reference Women; Body Composition.</p> <p>Energy in Human Nutrition: Energy Balance; Assessment of Energy Requirements; Deficiency and Excess.</p>
Unit-2	<p>Carbohydrates: Digestion; absorption and metabolism (Glycolysis, Gluconeogenesis, Citric Acid Cycle); Regulation of Blood Sugar; Glycemic Index of Foods; Dietary Fibre; Composition, Properties and Nutritional Significance.</p>
Unit-3	<p>Proteins: Digestion, absorption and metabolism (Transamination and deamination of amino acids), Urea Cycle; Assessment of Protein Quality (BV, PER, NPO); Factors affecting bioavailability.</p> <p>Lipids: Digestion, absorption and metabolism (beta- oxidation, de-novo synthesis of fatty acids, synthesis and breakdown of unsaturated fatty acids, cholesterol, phospholipids and triacylglycerol.</p> <p>Nutritional significance: Saturated, mono-unsaturated and poly-unsaturated fatty acids.</p>
Unit-4	<p>Minerals: Bioavailability, requirements, functions, deficiency and toxicity.</p> <p>Vitamins: Sources, requirements, bio-chemical functions, deficiency and toxicity.</p>
Unit-5	<p>Nutrition through the life span: Meal planning during adulthood, pregnancy, lactation, infancy, pre-school and school age, adolescence.</p>
Practical	<ul style="list-style-type: none"> Preparation of Meal Plans for different age and socio-economic groups. Presentation of Seminars and Group Discussions.
References	<ol style="list-style-type: none"> Cherley H (1982). Food Science (2nd edition), John Wiley & Sons, New York. Gopalan C. (eds.) (1993) Recent Trends in Nutrition, Oxford University Press. International Child Health: A Digest of Current Information. Jallinek G (1985). Sensory Evaluation of Food Theory and Practice, Ellis Harwood Chicester. Srilaxmi B. Dietetics (2014), Seventh edition, New Age International Publisher. Anita Singh, Ahar evam poshan vigyan, Star publication, Agra Devina sahai(2019),Ahar Vighyan , New Age International Publisher.

Course ID	Course (DEC)
MHSEL301A/B/C	Clinical and Therapeutic Nutrition
Objectives	<ul style="list-style-type: none"> To make the students understand the etiology and prevention of various diseases
Unit-1	<p>Basic concepts of diet therapy: New trends in delivery of nutritional care and dietary counseling.</p> <p>Assessment of Patient's needs based on interpretations of patient's data: Clinical, bio-chemical and personal.</p>
Unit-2	<p>Energy modifications and nutritional care for weight management: Identifying the over-weight and obese; Factors contributing to obesity; Low energy diet and behavioral modifications; Under weight – etiology and assessment; High energy diets for weight gain-anorexia, nervosa and Bullemlia.</p>
Unit-3	<p>Diets for febrile, infections and surgical conditions.</p> <p>Etiological factors, symptoms, diagnostic tests and dietary management: Stomach</p>

	diseases; Gastric and duodenal ulcers; Diarrhea and constipation
Unit-4	Diseases of the Liver: Viral, Hepatitis, Cirrhosis of liver; Diseases of the gall bladder. Diabetes Mellitus: Classification, symptoms, diagnosis, metabolic changes and management. Diseases of the Cardiovascular System: Atherosclerosis- Etiology and Risk Factors; Hyperlipidemia- Brief review of lipo-proteins and their metabolism; Hypertension.
Unit-5	Diseases of the Kidney: Glomerulonephritis, Nephrotic Syndrome and Renal Failure. Diseases of Musculo-skeletal System: Rheumatoid Arthritis, Osteo-arthritis, Osteoporosis, Gout. Interaction between drugs and nutrients
Practical	<ul style="list-style-type: none"> • Planning and preparing of therapeutic diets for patients of different disorders. • Visit to Hospital Kitchen. • Presentation of Report.
References	<ol style="list-style-type: none"> 1. Potter, N. and Hotchkiss JH (1996). Food Science, Fifth Edition CBS Publishers and Distributors, N. Delhi. 2. Peckhem G and Freeland Greaves GH (1979). Foundation of Food Preparation. 3. Piggott, JR (ed.) (1988), Sensory Analysis of Foods. Elsevier Applied Science, London. 4. Park K. (2000). Park's Text Book of Preventive and Social Medicine, 18th Edition. M/s Banarsidas Bhanot, Jabalpur. 5. Pomeroy's and Melmen CE (1996). Food Analysis: Theory and Practice CES Publishers and Distributor, New Delhi.

Course ID	Course (DEC)
MHSEL302A/B/C	Community Nutrition
Objectives	<ul style="list-style-type: none"> • To be familiar with the common nutritional problems of the community. • To get exposure of the schemes to combat malnutrition. • To be aware of the health hazards related to food and water
Unit-1	Concepts of community nutrition. Nutritional problems of the community and its implications for public health. Causes, incidence, signs and symptoms and treatment of PEM, Vitamin A deficiency, Iron Deficiency, Iodine Deficiency, Fluorosis and Lathyrism.
Unit-2	Sociological factors contributing in the Etiology and Prevention of Malnutrition: Food production and availability, cultural influences, socio-economic factors, food consumption and distribution, emergency disaster conditions.
Unit-3	Assessment of Nutritional Status: Meaning, Need, Objectives and Techniques. Primary Methods: Anthropometric measurements: Weight, Height, Skin Fold Thickness, Head Circumference, MUAC, Chest Circumference; Use of Growth Chart; Bio-chemical Assessment; Clinical Method; Dietary Survey - Types.
Unit-4	Secondary Methods: Vital Statistics; Mortality Rates- Crude death rate; infant mortality rate,; maternal mortality rate; survival rate; morbidity rate; fertility rate.
Unit-5	Malnutrition and Infection: Interrelationship between the two, Immunization.
Practical	<ul style="list-style-type: none"> • Assessment of a community using Rapid Assessment Procedure. • To undertake Dietary Survey by different Methods. • Calculation of food and nutrient intake of a particular class of people. • Determination of Hemoglobin Content in Human. • Anthropometric assessments. • Clinical Observations.
References	<ol style="list-style-type: none"> 1. Publications of the International Life Science Institute.

	<ol style="list-style-type: none"> 2. Serimshow N and Glesson G (ed.) (1991). Rapid Assessment Methodologies for Planning and Evaluation. Health Related Programme published by (INFDC) International Nutrition Foundation for Developing Countries. 3. Stryer L (1984). 4th ed. Bio-Chemistry WH Freeman and Co. 4. UNICEF's State of the World's Children. 5. WHO (1999) Nutrition for Health and Development Progress and Prospects. On the eve of the 21st Century WHO INHD, 99.9 Geneva.
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Course ID	Course (DEC)
MHSEL401A/B/C	Food Processing and Technology
Objectives	<ul style="list-style-type: none"> • Enabling students to various methods for evaluating variety of foods. • To understand and use various methods of preservation of food
Unit-1	<p>Introduction: Brief review of main food crops grown in the country – their nutritional importance.</p> <p>Food and its preservation (Home and Community Level including commercial operations): Cause of food spoilage; Needs and benefits of Food Processing and Technology for Food Preservation.</p> <p>Physical principles in food processing operations: Thermal processing (Use of heat); Types of heat treatments; Heat resistance of micro-organisms.</p>
Unit-2	<p>Refrigeration (Use of low temperature): Refrigeration and freezing – methods, principles and applications; Freezing and its effects of food components and structure; Shelf life of frozen foods.</p> <p>Drying and dehydration: Types of foods – traditional and new food products; Principles and applications; Home, community and commercial methods of dehydration; Effect on food quality.</p>
Unit-3	<p>Chemical Principles of Food Processing: Preservation/ processing by sugar, salt, curing, smoke, acids and chemicals.</p> <p>Principles and methods used for various products such as pickles, chutney, ketchup, sauces, fruit juices, squashes, fruit syrups and cordials.</p>
Unit-4	<p>Fruit and vegetable processing methods and products</p> <p>Milk Processing: Classification, standardization, homogenization and packaging.</p> <p>Meat, fish and egg processing: Methods and products; Ageing ; tenderizing; curing; smoking; freezing.</p> <p>Food additives: Classification and products</p>
Unit-5	<p>Nutritional Implications of Food Processing: Causes for loss of vitamins and minerals; Enrichment, restoration and fortification</p> <p>Sensory Analysis: Definition, types of test, use in product evaluation</p>
Practical	<ul style="list-style-type: none"> • Advance Diploma Courses may be arranged for the students for Food Preservation and Bakery and Confectionery. • Visits to food processing units such as Dairy, Cold Storage Plant and Preservation Centres.
References	<ol style="list-style-type: none"> 1. Cherley H (1982). Food Science (2nd edition), John Wiley & Sons, New York 2. Gopalan C. (eds.) (1993) Recent Trends in Nutrition, Oxford University Press 3. International Child Health: A Digest of Current Information 4. Jallinek G (1985). Sensory Evaluation of Food Theory and Practice, Ellis Harwood Chicester 5. Jelliffe DE and Jelliffe EFP (1989). Community Nutritional Assessment, Oxford University Press

Course ID	Course (DEC)
MHSEL402A/B/C	Institutional Food Administration
Objectives	<ul style="list-style-type: none"> To understand the special characteristics of food service establishment. To learn manpower management techniques.
Unit-1	<p>Introduction to Food Service Systems: Characteristics of various types of food service units.</p> <p>Strategies in Planning: Conceptual Strategy; Marketing Strategy; Financial Strategy.</p>
Unit-2	<p>Management of Resources: Finance; Determining the finance needed to establish or run a unit; Budgets; Sources of finance; Planning adequate cash flow.</p>
Unit-3	<p>Space for Equipment : Steps in planning layouts; Determining equipment; Selection & Placement; Maintenance of equipment; Layout analysis</p>
Unit-4	<p>Material: Menu Planning suitable to different systems; Recipe development & Standardization of yields.</p> <p>Staff: Manpower planning; Manpower placement; Recruitment, induction, motivation & performance appraisal</p>
Unit-5	<p>Cost accounting/ Analysis: Food cost analysis; Records to be maintained; Report & trend analysis; Marketing & Sales Management; Marketing strategies; Sales analysis; Market promotion.</p>
Practical	<ul style="list-style-type: none"> Evaluation of food Service Units Market survey of food service equipment Planning menus for quantity- Banquet, outdoor catering, packed Meals, Restaurant. Standardizing recipes for quantity-100; 250; 500 Cost Analysis of Menus in- College Canteen, Hostel Mess, Hospitals
References	<ol style="list-style-type: none"> Publications of the International Life Science Institute. Serimshow N and Glesson G (ed.) (1991). Rapid Assessment Methodologies for Planning and Evaluation. Health Related Programme published by (INFDC) International Nutrition Foundation for Developing Countries. Stryer L (1984). 4th ed. Bio-Chemistry WH Freeman and Co. UNICEF's State of the World's Children. WHO (1999) Nutrition for Health and Development Progress and Prospects. On the eve of the 21st Century WHO INHD, 99.9 Geneva.

Course No.	Course (Interdepartmental Course)
MHSIER-301	Dietetics and Therapeutic Nutrition
Objectives	<ul style="list-style-type: none"> To know the principles of diet therapy. To understand the modification of normal diet for therapeutic purposes.
Unit-1	<p>Principles of Dietetics, Preventive promotive and curative role of dietetics in health and disease.</p> <p>Principles and importance of Menu Planning.</p>
Unit-2	<p>Nutrition during the life cycle: Infancy, Early Childhood/ Preschool age, School going age, Adolescence, Old Age</p>
Unit-3	<p>Dietary modification required in the following conditions:</p> <ul style="list-style-type: none"> Overweight and underweight. Fever and infections. Lower and upper Gastro-intestinal tract disorders. Liver and Pancreatic disorders.
Unit-4	<p>Causes, symptoms and dietary modification required for the following conditions:</p> <ul style="list-style-type: none"> Diabetes Hypertension Cardiovascular disorders

	<ul style="list-style-type: none"> • Cancer • Nutritional Anemia
Unit-5	Planning and preparation of normal and therapeutic diets for various physiological and disease conditions.
Practical	<ul style="list-style-type: none"> • Menu planning for various stages of life span.
References	1.Srilaxmi B. Dietetics (2014), Seventh edition, New Age International Publisher. 2.Anita Singh, Ahar evam poshan vigyan, Star publication, Agra

DISCIPLINE 3: Extension and Communication

Course ID	Course (Core)
MHSCC-103	Extension and Communication Concepts in Community Development
Objectives	<ul style="list-style-type: none"> • To be aware of the approaches to development. • To understand the existing support structure for development efforts. • To understand the process of communication in development work
Unit-1	Community: Definition, concept and characteristics of a community; Structure and organization of different types of communities: tribal, rural and urban.
Unit-2	Social groups and Organizations: Concept, types, characteristics of different social groups, interests, attitudes and motivations for affiliation. Community Leadership: Concept, leadership theories; patterns and characteristics of leadership in different communities; Role of leadership in community development.
Unit-3	Extension: Meaning, changing concept of extension, philosophy, objectives, principles, functions, components of extension. Extension systems: Outline of National Extension Systems in India: Community Development Programme, ICAR Extension System; State Agricultural Universities; KVK; Role of State Governments in Extension Programmes related to Community Health and other policies, Central Social Welfare Board, Panchayati Raj System.
Unit-4	Extension Teaching: Methods and Process; Steps in extension teaching methods; Teaching Aids: types, characteristics and functions; Role of Media in the Process of Learning; Cone of Learning.
Unit-5	Development Communication: Definition, Nature, Role and Significance of Development Communication; Interrelation between Development and Development Communication; Models of Development Communication.
Practical	<ul style="list-style-type: none"> • Preparation of Teaching Aids: Charts, Posters, Flash Cards and Literature • Visit to nearby slum areas and other places • Preparation of reports based on survey
References	1. Communication for Development in the Third World Theory and Practices (1991) . Sage Publication, New Delhi. 2. Chaubey BK (1990) A Handbook of Education Extension, Jyoti Publication, Allahabad 3. Singh , R. (1987)Text Book of Extension Sahitya Kala Prakashan , Ludhiana 4. Extension Education in Community (1961) Ministry of Food and Agriculture, Government of India, New Delhi 5. Extension Programme Planning, Oxford and IBH Publishing Company Pvt. Ltd. New Delhi

Course ID	Course (Core)
MHSCC-301	Extension Programmes: Design & Evaluation
Objectives	<ul style="list-style-type: none"> • To understand the process of programme planning in extension.

	<ul style="list-style-type: none"> To learn the principles and procedures involved in programme planning ,implementation and evaluation.
Unit-1	Programme Planning: Meaning and importance of programme planning in extension; Principles of programme planning: programme development cycle and its components; Identifying felt needs of people, collection of base line data; SWOT Analysis.
Unit-2	Plan of Work: Meaning, importance, components of a plan of work; Developing a plan of work - factors to be considered in preparing the plan of work, Pre-requisites for developing plan, criteria for judging the plan of work; Resources for programme planning - Meaning of resource, types of resources, identification and appraisal of resources.
Unit-3	Programme Implementation: Aspects of execution, Factors responsible for the successful conduct of a programme, Role of officials and non-officials in programme implementation, Linkages with other agencies, Problems in implementation.
Unit-4	Evaluation and Follow-up: Meaning and purpose of evaluation, types of evaluation: self-evaluation and external evaluation, criteria for evaluation, Phases of evaluation, tools of evaluation, observation sheet, interview schedule, rating scale and checklist, Follow-up: Need for follow-up, methods of follow-up, correspondence, spot visit, meetings.
Unit-5	Documentation: Need for reporting and recording, Procedures for recording - aspects to be covered, Records and registers to be maintained in programme implementing institution.
Practical	<ul style="list-style-type: none"> Development of social welfare projects Development of Survey Performa for Review of welfare programmes Analysis of on-going welfare programmes Visit and survey places where on-going welfare programmes are under implementation Reporting on welfare programmes and presentation of reports
References	<ol style="list-style-type: none"> Sandhu A.S. (1994) Extension Programme Planning , Oxford and IBH Publishing Compnay Pvt. Ltd., New Delhi. Communication for Development in the Third World Theory and Practices (1991) . Sage Publication, New Delhi. Chaubey BK (1990) A Handbook of Education Extension, Jyoti Publication, Allahabad Singh , R. (1987)Text Book of Extension Sahitya Kala Prakashan , Ludhiana Extension Programme Planning, Oxford and IBH Publishing Company Pvt. Ltd. New Delhi

Course ID	Course (DEC)
MHSEL301A/B/C	Communication Technologies in Extension
Objectives	<ul style="list-style-type: none"> To impart knowledge and understanding of various communication systems. To enhance the versatility of the students in the selection and use of media in different socio-cultural environments. To impart skill in preparation of Computer Aided Media messages
Unit-1	Communication Systems: Types of communication systems- concept, functions and significant interpersonal, organizational, public and mass communication. Elements, character and scope of mass communication. Mass communication-models and theories; Visual communication-elements of visual design - colour, line, form, texture and space; Principles of visual design - rhythm, harmony, proportion, balance and emphasis; Visual composition and editing.
Unit-2	Media Systems: Trends and Techniques: Concept, scope and relevance of media in society; Historical background: nature, characteristics, advantages and limitations and future prospects of media; Traditional media vs. Modern media.
Unit-3	Electronic Media: Trends in Radio, TV and Cyber Media, Impact and policies, future challenges and scope. Media Research: Need, scope and approaches.

Unit-4	Print Media: Role of press in Mass Media Press Law in India: History and present scenario News: Its meaning, concept and news agencies
Unit-5	Advertising: Definition, concept and role of advertising in modern marketing system and national economy.
Practical	<ul style="list-style-type: none"> • Preparation of Reports with the help of computers. • Evaluation of Advertisements • Writing of Newspaper Story • Preparation and Mock Presentation of Radio/ Television Interviews • Preparation of Digital Library of Photographs
References	<ol style="list-style-type: none"> 1. Chaubey BK (1990) A Handbook of Education Extension, Jyoti Publication, Allahabad 2. Singh, R. (1987) Text Book of Extension Sahitya Kala Prakashan, Ludhiana 3. Extension Programme Planning, Oxford and IBH Publishing Company Pvt. Ltd. New Delhi 4. Joshi Umer (1997). Textbook of Mass Communication and Media, Anmol Publications, New Delhi. 5. Kergner, Harold, Project Management- A System Approach to Planning, Scheduling and Controlling, New Delhi, CSB Publishers and Distributors.

Course ID	Course (DEC)
MHSEL302A/B/C	Training and Development
Objectives	<ul style="list-style-type: none"> • To understand the educational process in development
Unit-1	Training and Learning: Concept of learning and types of learning, factors affecting learning among adults; Types and methods of learning; Concept and goals of training - self-development, action learning, transformation and organizational development, enhancing organizational effectiveness, team spirit.
Unit-2	Training Methodologies: Current trends in training methodologies, organizational development approach, competency based training, participatory training methodologies - aspects, advantages, limitations, implications for training process; Outline of training Administration; Budget and records
Unit-3	Trainer & Trainee Interface: Roles of a trainer, counselor, coach, facilitator, teacher and expert; Competencies of a trainer; Trainer-trainee perceptions
Unit-4	Training Process: Different phases of training, conceptual models of training, systems approach to training: inputs, process, outputs; Training Strategy and Designs: training need assessment, planning training programmes, organizational environment, Training facilities and other resources; Training methods and interaction styles: classification of training methods, their importance, use and Limitations-selecting, appropriate methods to suit situations and circumstances; Evaluation: meaning, purpose, elements of evaluation and tools for evaluation.
Unit-5	Organizational factors and training: Working climate, leadership, values, mechanics of change. Developing organizational structures for facilitating micro and macro level interventions for facilitating development
Practical	<ul style="list-style-type: none"> • Designing training programmes for different developmental goals • Developing training lectures and material for specific trainings • Evaluating training programmes • Visit to training and development organizations
References	<ol style="list-style-type: none"> 1. Rae, Leslie, Techniques of Training, Jaico Publishing House, Delhi, 1998 2. Pareek, Udai and Lynton, Rolf P., Training for Development, D.B. Taraporewala,

	<p>Bombay, 1990</p> <p>3. Rudrabasavraj, M.N., Executive Development Himalaya Publishing House, Mumbai, 1990</p> <p>4. Prasad, L.M., Principles and Practice of Management, S.Chand & Sons, New Delhi</p>
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Course ID	Course (DEC)
MHSEL401A/B/C	Gender in Extension and Development
Objectives	<ul style="list-style-type: none"> To understand the concept, need, relevance and dimensions of gender empowerment. To get sensitized to gender disparities and problems of women. To understand the efforts at different levels for empowering women
Unit-1	Gender and Development: Concept of gender, gender roles, changing trends, gender analysis matrix; Shift from welfare to development and empowerment, gender in development, gender and development; National and international efforts for gender empowerment
Unit-2	Status of Women: Status- meaning, status of women-a situational analysis, demographic, education, employment, political and health (general, occupational and reproductive); Changing scenario.
Unit-3	Violence Against Women: Dowry, divorce, female foeticide and infanticide, domestic violence, sexual harassment and exploitation, portrayal of women in mass media; Efforts for elimination of all forms of discrimination.
Unit-4	Policies and Programmes for Women's Development: National Policy for Empowerment of women, policy perspectives, mainstreaming, a gender perspective in the development process; Economic empowerment: poverty eradication, micro-credit, self-help groups, women and agriculture, women and industry and support services; Social empowerment: education, health, nutrition, drinking water and sanitation, housing and shelter, environment; Legal empowerment: legal literacy on personal and family laws, role of family court and legal aid centers; Political empowerment: role of Panchayati Raj in the political empowerment of women.
Unit-5	Support System: Role and functions of the Department of Women and Child Development, Central Social Welfare Board, State Social Welfare Boards, National Commission for Women, Women's Development Corporation.
Practical	<ul style="list-style-type: none"> Study of women's status in a community Identification of women's problems in a community Preparation of an album on women's issues. Visit to Women Welfare Organizations.
References	<ol style="list-style-type: none"> Choudhary, D.Paul- Child Welfare and Development. Desai, N and Pate, V., Indian Women: Change and Challenge in the International Decade. Singh, Surendra and Srivastavam S.P. Gender Equality Through Women's Empowerment: Strategies and Approaches Kant, Anjani- Women and the Law.

Course ID	Course (DEC)
MHSEL301A/B/C	Community Health Management
Objectives	<ul style="list-style-type: none"> To understand the concept of health and health indices popularly used. To realize the health problems of the community and the scientific intervention
Unit-1	Concept of Health and Health Care: Concepts of health and positive health, definitions

	of health; Health – factors affecting health, health as a human right; Concept of community health and global health, health for all; Primary health care - definitions, principles, components, comprehensive health care, levels of prevention, concept of reproductive health.
Unit-2	Health and Development Indices: Health indices and related indices in community health, fertility indicators, demographic indicators – sex ratio, social and mental health indicators; Human Development Index; Reproductive Health Index.
Unit-3	Community Health Needs and Problems: Health needs and problems related to sanitation and environment, protected water, personal hygiene and pollution control; Ecology and environment, global warming-causes, effects and prevention, natural and manmade disaster management; Health needs of special groups-women, infants, children; Major health problems in India; Communicable and non-communicable diseases; Population problem and its impact; Problems of malnutrition; Reproductive health problems.
Unit-4	Health Care Services: Health administrative set up - state, national, urban, rural, private; Role of NGOs in health services; Importance of National Health Programmes; Child survival and safe motherhood; Importance of Child Health and related programmes; Health in relation to community development; Important National and International Health Agencies; Health Information, education, communication.
Unit-5	Management of Information System in Health Sector: Health surveys; Monitoring health; Health regulations and acts, health legislations; Census; Evaluation of health services. Ecology and Environment: Cause, effects and prevention of global warming; Concept of natural and man-made disasters.
Practical	<ul style="list-style-type: none"> • Identification of Health needs of special groups - infants, young children and adolescents, women, Elders, etc. • Preparation of Health Survey Schedules for different groups • Visit to Hospitals and Organizations related with Health
References	<ol style="list-style-type: none"> 1. Suchman, E.H.- Sociology in the Field of Public Health. 2. Smolenske- Principles of Community Health. 3. Dak, T.M.- Sociology of Health in India 4. Mangatt, A.N. and Bomen, S.C.- Social Service and Mental Health

DISCIPLINE 4: Textiles and Clothing

Course ID	Course (Core)
MHSCC-203	Textile Science
Objectives	<ul style="list-style-type: none"> • To understand the basics of textile with relation of material and techniques
Unit-1	Polymer Science: Definition of Polymer, Degree of polymerization, methods and techniques of polymerization.
Unit-2	Cotton, Silk and Wool: Morphological and chemical structure, composition, physical and chemical properties
Unit-3	Yarn: Types, numbering system Yarn Manufacturing: Spinning process
Unit-4	Weaving: Parts and functions of loom, Types of Weaver- Basic and Decorative. Knitting: Types of Knitting, Properties. Felts and Non-woven: Felting process, Knitting, Bonding and lace-making.
Unit-5	Dyeing with Chemical dyes: Dyes classification, structure & users. Theory of dyeing; Types of dyeing- Stock dyeing, Yarn dyeing, Piece dyeing, Jet dyeing, Jig dyeing, Beam dyeing, Union dyeing, Pad dyeing, Solvent dyeing, Vacuum impregnation, Polychromatic dyeing, Cross dyeing, Foam dyeing.

Practical	<ul style="list-style-type: none"> • Identification of weavers by sample collection. • Removal of stains on cellulosic, silk and synthetics.
References	<ol style="list-style-type: none"> 1. A Taylor- Technology of Textile Properties, Forbes Publications Ltd., London 2. Dhantiyagi S.- Fundamentals of Textiles and Their care. Orient Longman Ltd, New Delhi 3. Goldstein and Goldstein - Art in Everyday Life 4. Hollen and Saddler- Textiles. Macmillan Publications Co. New York 5. Hess K.P.- Textiles Fibres and their use. 6. Potter M.D. and Corbman B.P. - Fibre to Fabric. The Crais and Publishing Company New York. 7. Shenai V.A.- History of Textile Design. Sevak Publications Mumbai

Course ID	Course (DEC)
MHSEL301A/B/C	Textiles Testing and Quality Control
Objectives	<ul style="list-style-type: none"> • To understand the quality of textile and procedures involved in quality control
Unit-1	Importance of Textile Testing and Quality Control Quality control charts: concept, use, advantage, control limits
Unit-2	Standardization and testing Conditions: Definitions of humidity, Relative humidity, moisture content moisture region. Standard atmospheric conditions and standard testing conditions.
Unit-3	Fibre Properties: length, fineness, maturity Strength: Definition, importance of above properties Methods of determination of above properties: Hand stapling method, fibrograph (for length) Gravimetric, Air flow, Micronaire (for fineness), Direct and indirect (for maturity) single fibre strength and bundle strength (for strength).
Unit-4	Study of Yarn Properties: Yarn Count- Direct, indirect and universal system of yarn numbering, measuring yarn count. (Knowles balance and Quadrant balance); Yarn Twist- Types and amount of twist, effect of twist, determination of twist (single yarn twist tester and continuous twist tester); Evenness of Yarn- Types of variations, Measuring evenness- Uster evenness tester; Yarn Strength- Instron tester.
Unit-5	Study of fabric properties: Testing of fabric length, width and thickness, Shirley thickness tester; Fabric strength- Measuring tensile strength. Tearing strength, bursting strength; Fabric abrasion testing- pilling testing, Stiffness testing; Fabric colour fastness testing- Colour fastness to sunlight, washing and crocking.
Practical	<ul style="list-style-type: none"> • Presentations, seminars on recent developments
References	<ol style="list-style-type: none"> 1. Booth, J.E.: Principles of Textile Testing Newness Butter Worth, London 2. Bilies, J. Cotton and Helen H Epps - Textile testing and Analysis- Prentice Hall, New Jersey 3. John, H Skinkle- textle testing- Brooklyn, New York 4. Grover and Hanby- Handbook of textile testing and Quality Control Wiles.

Course ID	Course (DEC)
MHSEL302A/B/C	Fabric Ornamentation
Objectives	To understand the various techniques and procedures of fabric ornamentation
Unit-1	Fabric finishing methods: Classification of finishes. singeing, beatling, calendaring, weighing, shrinking, mercerization Parchmentisation, Wash-N-Wear. Special Purpose finishes: flame retardant, water resistant and repellent, antistatic, stain and soil release finish.
Unit-2	Dyeing: Tie and Dye and Batik; Dyeing with natural dyes, use of pigments; Dyeing auxiliaries and their use; Dyeing defects and their remedies.
Unit-3	Printing: Printing methods- Block, stencil, screen, roller, rotary; Printing auxiliaries, their

	use and importance; Printing styles- direct, resist, discharge, photographic, transfer, flock printing; After treatment of printed goods.
Unit-4	Embroidery: General embroidery techniques; Hand embroidery- knowledge of 25 hand embroidery stitches; Traditional Indian embroidery- Chikankari, Kasuti, Phulkari, Kashida, Kantha, Kutch, and Kathiawar.
Unit-5	Appliqué Work and Quilting: Appliqué Work- basics, hand appliqué; Machined appliqué, bias tape appliqué, reverse appliqué techniques; Quilting - the art, quilting tools, designs; Basic quilting technique.
Practical	<ul style="list-style-type: none"> • Sample preparation – Tie-n-Dye, Batik, Printing. • Sample Preparation- Embroideries • Article- Appliqué work/Quilting.
References	<ol style="list-style-type: none"> 1. V.A. Shenai- Chemistry of dyes and principles of dyeing. Sevak Prakashan, Mumbai 2. R.S. Prayag -Technology of textile printing. Noyes Data Corp. 3. V.A. Shenai- Technology of printing- technology of textile processing, Vol.IV, Sevak Prakashan 4. M.L. Gulrajani and Deepti Gupta (1990)- Natural Dyes and their application to textiles. Ed. IIT, Delhi Publications 5. Big Book of Needle Craft- Odhamas Publications 6. Needle Craft- Reader's Digest 7. Creative Embroidery Designs - Ondorisha Publications 8. Pandit Savitri - Indian Embroidery: its variegated charm. Baroda, Faculty of Home Science 9. Chattopadhyaya and Kamala Devi - Handicrafts of India. New Delhi. Indian Council of Cultural Relations. 10. Mary – Embroidery 11. Calico – Embroidery 12. Dongerkery S. - The romance of Indian Embroidery. Bombay. Thacker Co. Ltd.

Course ID	Course (DEC)
MHSEL401A/B/C	Advance Apparel Construction
Objectives	<ul style="list-style-type: none"> • To study the protocols of selecting suitable fabrics for apparel construction
Unit-1	Cutting and making the fabric Basic bodice block: Child and adults, sleeve blocks- child and adult's plain sleeve block, basic fitted skirt block
Unit-2	Different types of sleeves, collars and skirts, pockets, pleats, tucks, waistbands construction (any five of each) Different types of yokes, necklines, basic silhouettes
Unit-3	Dart Manipulation: From armhole, shoulder, neckline Adaptation of basic drafting to the required design
Unit-4	Pattern Alteration: Plain sleeve-length and width alteration. Plan Skirt- length alteration, alteration for prominent abdomen or hips. Width alteration- increase and decrease up to two inch and above 2 inch.
Unit-5	Alterations for fitting: any 15 problems of fitting with reference to shoulder, neckline, armhole, skirt and overall garments and their remedies
Practical	<ul style="list-style-type: none"> • Sample preparation: blocks- child and adult's bodice block, sleeve below- child and adult's plane sleeve. • Sample preparation- different types of sleeves, pockets, pleats, tucks, waistbands (5 each). • Sample preparation- Different types of yokes, necklines (5 each).

References	<ol style="list-style-type: none"> 1. Basic Process of clothing construction, Dongaji Das, New Raj Book Depot, New Delhi 2. Complete Sewing Guide, Reader's Digest Publications 3. Handbook for Fashion Designing, Best Drafting Techniques, Rither, Jindal Mittal Publications, New Delhi 4. Isabel B. Wingots Textile, Fabrics and their selection practice, Hall Ive Ends, Wood Cliff, New Jersey 5. More dress pattern designing, Natalie Bray, Om Boom Services, Prakash House, New Delhi 6. Pattern for women's clothing, Grey Cookling, Om Boom Services, Prakash House, New Delhi 7. Zarpaker system of cutting, Zarepker, Navneet Publications Ltd., Bombay
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Course ID	Course (DEC)
MHSEL402A/B/C	Textile Management
Objectives	<ul style="list-style-type: none"> • To have an insight of current marketing needs in textile industry
Unit-1	Role and importance of Textile and Garments Industry in Indian economy Problems and prospects of textile and garment industry Textile policy under 5 year plans.
Unit-2	Textile industry management: Management hierarchy, responsibilities, coordination, organization, management aids, factors influencing management organization. Comparative organization of different textile groups: Organization of senior management, organization of productive functions, Departmental management organization.
Unit-3	Production management: Purpose of production planning and control; Methods of production planning and control.
Unit-4	Role of standards in quality control: Framework of control. Organization and techniques of control
Unit-5	Export procedure and distribution channels used to reach foreign market. Import and export policies of Indian government. Recent trends in textiles
Practical	<ul style="list-style-type: none"> • Presentation and seminars on special topics
References	<ol style="list-style-type: none"> 1. Gerry Cooklin - Introduction to clothing manufacture, Black Well Science 2. Harold Carr & Barbara Katham - The technology of clothing manufacture, Black Well Science 3. A.J. Chuter- Introduction to clothing production, Black Well Science 4. Vidyasagar P.V. - Encyclopedia of textiles-textile management, Mittal Publications, New Delhi 5. Rattan J.B. - Modern Textile management, Abhishek Publications, Chandigarh

DISCIPLINE 5: Family Resource Management

Course ID	Course (Core)
MHSCC-203	Theory of Management
Objectives	<ul style="list-style-type: none"> • To understand the basic concepts of resource management
Unit-1	Management: Evolution, Concept, Objectives, Nature, Philosophy, Principles. Decision Making: Concept, Types, Modes of Decision Making, Tools and Techniques
Unit-2	Planning: Concept, Nature, Purpose, Principles and Techniques. Controlling: Concept, Objectives, Principles.

	Organizing: Concept, Nature, Purpose, Principles and Types.
Unit-3	Directing: Concept, nature, Types and Significance. Monitoring and Evaluation: Concept, Tools and Techniques
Unit-4	Personality: Concept, Development and Determinants. Attitudes: Concept, Difference between Beliefs and Values Stress: Concept and Management.
Unit-5	Staffing: Concept, principles. Recruitment: Concept, Types, Principles
Practical	
References	<ol style="list-style-type: none"> 1. Mamoria, CB, Personnel Management, Himalaya Publishing House, Mumbai, 1998 2. Pylee, M.V., Workers Participation in Management, Vikas Publication, Delhi, 1999 3. Vishwanath, Workers' Participation in Management, Mittal Publications, New Delhi, 1992 4. Lal Das D.K. Personnel Management, Industrial Relations and Labour Welfare.

Course ID	Course (Core)
MHSCC-302	Ergonomics for Home Science
Objectives	<ul style="list-style-type: none"> • To study the principles of designing in terms of work efficiency
Unit-1	Ergonomics: Definition, History and evolution. Scope of Ergonomics in home and other occupations Nature of work in household and other occupations
Unit-2	Human Body and Work: Physiology of Neuro-muscular function in relation to occupational ergonomics; Physiological factors in muscle work; Physical work capacity; Energy requirement for muscular work; Energy expenditure for different activities; Endurance and muscular strength.
Unit-3	Job Analysis: Significance of job analysis for occupational ergonomics; Fundamental elements of job analysis. Concepts and significance of Anthropometry in relation to occupational ergonomics: Definition and Scope; Identification and analysis of postures
Unit-4	Environmental factors in relation to occupational ergonomics: Physical characteristics of task; Environmental stress factors such as Heat, Noise and Light; Effects and Control of Heat Stress; Noise Pollution and its effects; Effect of light on work efficiency
Unit-5	Application of Ergonomic Principles in: Tool Evaluation and Design; Work Station Evaluation and Design; House hold works; Maintenance of Postures
Practical	<ul style="list-style-type: none"> • Anthropometry for household work • Simulation studies in Kitchen Designing • Assessment of Efficiency of Tools used in household works • Assessment of impact of Wrong Postures on human body
References	<ol style="list-style-type: none"> 1. Gross I.H. and Crendall, E.W. and Knoll, M.M.- Management for Modern Families, Prentice Hall Inc. New Delhi. 2. Grand Jeen Ettiens (1978)- Ergonomics of the Home, Taylors and Francis Ltd., London. 3. Nickell and Dorsey, Management in Family Living. 4. Nag, P.K. (1996) Ergonomics and Work Design and Emerging Issues in Organizational Science, New Age International (P) Ltd., New Delhi. 5. Chaffinm D.B. and Anderson G.B. (1984) Occupational Bio-Mechanics,, John Wiley & Sons.

Course ID	Course (Core)
MHSCC-301	Entrepreneurship Management
Objectives	<ul style="list-style-type: none"> • To study basics of managing business related to Home Science

Unit-1	Entrepreneurship Management: Concept, need and process of entrepreneurship development. Types of enterprise
Unit-2	Role of Enterprise in National and Global Economy: Government policies and schemes for enterprise development. Institutional support in enterprise development and management
Unit-3	Entrepreneurship motivation and competency: Important features of entrepreneurial personality. Launching an enterprise: Environment scanning, enterprise selection, market assessment
Unit-4	Resource mobilization, costing and monitoring, evaluation Performance appraisal and assessment Profitability and control measures
Unit-5	Market economy: Basic definitions, types of market, marketing mix, marketing environment Strategic Planning and Marketing steps: Product development, promotion and distribution.
Practical	<ul style="list-style-type: none"> • Preparing Project Proposal to start a new enterprise and feasibility report
References	<ol style="list-style-type: none"> 1. Bedekar, S.J. (1991): Marketing- Concept and Strategies, Oxford University Press, Mumbai. 2. Deacen, RE and Firebaugh, F.M. (1981): Resource Management Principles and Application, Allyn and Dacen and Bacen Bosten. 3. Hirtich R.D. and Peters M.P. (1995): Entrepreneurship- Starting Developing and Managing a New Enterprise, Richard D. Irwinm INC, U.S.A. 4. Memores, C.B., Principles and Practice of Marketing in India, Kitab Mahal 5. Meredith, G.G. et.al. (1982) Practice of Entrepreneurship. ILO, Geneva

Course ID	Course (DEC)
MHSEL301A/B/C	Management of Energy and House Hold Equipment
Objectives	<ul style="list-style-type: none"> • To understand the concepts of managing energy and house hold equipments for better output
Unit-1	Sources of energy and their classifications: Non-renewable vs. renewable sources, alternative sources, conventional vs. non- conventional sources, commercial vs. non-commercial sources.
Unit-2	Energy conservation: Principles of improving the efficiencies of- Combustion, Heat exchange and Energy conservation; Proper uses and maintenance of domestic heating, cooking, lighting and other appliances; Energy conservation in the transport sector
Unit-3	Basics of house hold equipments: About electricity - Power source, voltage, resistance, current, series/parallel circuits, AC/DC sources; Electrical materials- Conductors, semi-conductors, insulators; Important parts in an appliance - Main Cord, switches, plugs and sockets, controls such as thermostats, light bulbs, heating elements, Motors, Fans & Blowers, Bearings and Bushings, Electronic control systems, Batteries etc.
Unit-4	Product testing for quality: Need, types of testing, equipments required for testing
Unit-5	Safety against household appliances: Definition and classification of safety; Electric shock and its prevention; Quality control - Provisions and norms
Practical	<ul style="list-style-type: none"> • Survey of available household equipments and appliances in the market. • Study of basic functions and mechanisms of some household equipments such as vacuum cleaner, Refrigerator, Microwave oven etc. • Visit to some petro-companies such as Indian Oil, Bharat Petroleum etc.
References	<ol style="list-style-type: none"> 1. Avery, M. (1955): Household Physics, McMillan Co., New York. 2. Johnson B.J. (1970): Equipment for Modern living McMillan Co., New York 3. Wilson P (1981): Household Equipment Selection and Management, Houghton Miflan Co., Boston. 4. Reddy B.S. (1998) Urban Energy Systems, Concept Publishing Co., New Delhi 5. Rai G.D. (1996): Non-Conventional Energy, Khanna Publishers, New York.

Course ID	Course (DEC)
MHSEL302A/B/C	Resource Management
Objectives	<ul style="list-style-type: none"> To comprehend the necessity of sustainable usage of natural resources
Unit-1	Management of Human Resources: Principles of human resource use; Motivation vs. Productivity; Training for personality development and leadership; Efficiency – definition and factors affecting efficiency
Unit-2	Management of Environment: Definition and scope of environment studies; Natural Resources-conservation and sustainable development; Population and environment
Unit-3	Environment in relation to Public Health: Environment pollution and community health, water-borne diseases, Air borne diseases, chemical insecticides and its impact on health, other toxic agents.
Unit-4	Professional Management: Introduction; Concepts of professional Management; Aspects of Professional Management – Office Management, code/conduct, Duties of employees under various provisions; Professional relations, duties and liabilities in profession.
Unit-5	Current Trends in Resource Management: Socio-economic environment's impact on families and organization; Consumer Protection; Role of women in Environment Protection.
Practical	<ul style="list-style-type: none"> Personality Development Games – Organization and Interpretations. Survey of specified area for quantification of pollution problems. Preparations of Reports for Waste Management and Pollution control. Visit to government/ non-government organizations to survey professional management practices.
References	<ol style="list-style-type: none"> Werther, Williams B and Davis, Keith, Human Resource and Personnel Management, McGraw Hill Inc., New Delhi,1996. Fisher, Cynthia D., Schoenfeldt, Lyle F., and Shaw, James, B., Human Resource Management, All India Publishers and Distributors, Chennai,1997. French, Wendell L., Human Resource Management, All India Publishers and Distributors Regd., Chennai,1997. Monappa, Arun, Managing Human Resources, McMillan India Limited, New Delhi,1997. Chatterjee, Bhaskar, Human Resource Management, A Contemporary Text: Sterling Publishers Pvt. Ltd,m New Delhi, 1995.

Course ID	Course (DEC)
MHSEL401A/B/C	Residential Interior Design
Objectives	<ul style="list-style-type: none"> To understand the needs of managing space with relation to needs and efficiency
Unit-1	Elements of art and principles of design with reference to interior designing Terminology used in interior designing, technical drawing and graphic presentation.
Unit-2	Materials and methods of interior construction Planning and prioritizing the space Connecting the Space
Unit-3	Fixtures and finishes, Lightings Furniture design and furnishing
Unit-4	Accessories in interior designing: Gardening, sculpture, paintings, flower arrangement
Unit-5	Designing of: Living space; Kitchen; Sleeping space; Children's room; Bathroom
Practical	<ul style="list-style-type: none"> Designing sheets and models
References	<ol style="list-style-type: none"> Ball, Vietorims, K. (1980)- The of Interior Design, McMillan & Co., New York. Bhatt. P.D., Goenka S (1990)- Foundation of Art & Design, Lakhani Book Depot,

	<p>Mumbai</p> <ol style="list-style-type: none"> 3. Encyclopedia of Interior Design 4. Gross, I.H. and Crendall, E.W., and Knoll, M.M.- Management for Modern Families, Prentice Hall Inc. New Delhi 5. Bherathe W and Redsh, K. (1986)- Family Resource Management, Discovery Publishing House, New Delhi, 1994 6. Caroline Atkins, The Sunday Times- Small Spaces for Modern Living 7. Geetika Khanna: The art of interior designing 8. Encyclopedia of interior designs 9. Ball, Victorims K.- The art of interior design, Mc Millan & Co., New York 10. Nickell and Dorsey- Management in family living. CBS Publishers and Distributors, New Delhi 11. A new smart approach to home decorating- Creative Home Owner-Upper Saddler, River, New Jersey
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Course ID	Course (DEC)
MHSEL402A/B/C	Consumer Economics
Objectives	<ul style="list-style-type: none"> • To comprehend the needs and demands in the local and international markets
Unit-1	Concept of consumer economics- consumption, field of consumer economics: Consumer and his wants; Origin of human wants; Characteristics of wants; Classification of wants; Demand: Determinants, elasticity.
Unit-2	The theory of consumer behavior: The central problem of choice; The utility solution; Diminishing marginal utility and law of equi-marginal utility; Factors affecting choice are decision making. Economy system: Purpose; Type of economic system; Indian economy- characteristics
Unit-3	Market and marketing: Concept, classification-function, types-wholesale, retail etc.; Marketing environment, Marketing theories-models Marketing strategies-concept, types based on product, seller, demand, media mix, price promotion and policy. Market and Market prices: Definition and types of Market prices; Pricing under perfect and imperfect competition and monopoly.
Unit-4	Consumer credit: Definition; Types of credits; Factors affecting consumer credit decisions; Sources of consumer credit.
Unit-5	Consumer protection: Government protection; Public protection; Standardization of consumer goods and testing methods
Practical	Visit to different types of Markets – organized, unorganized, local, weekly, etc Survey of Consumer Forum for Learning the Working of the Forum To survey the Banking Procedures for Consumer Credit.
References	<ul style="list-style-type: none"> • Fred D. Reynolds and Coilliean D. Wells (1977): Consumer Behaviour, McGraw Hills Series in Marketing, New York. • London D.L. & Bitta A.J.D., (1986): Consumer Behaviour, McGraw Hill Book Company, New York • East Robert (1990): Changing Consumer behaviour, Cassal Educational Limited, Artillery House, Artillery Row, London. • Garman and Thomas et al (1974): The Consumer;s World Buying, Money Management and Issue, McGraw Hills Book Co., New York

OTHERS: SEC, Practical, Dissertation etc

Course ID	Course (Core)
MHSCC-104	Research Methodology
Objectives	<ul style="list-style-type: none"> To understand the research methods specific to Home Science
Unit-1	Social Research: Concept, Nature, Scope, Types of Researches in Home Science. Formulation and Selection of the Research Problems Participatory Research
Unit-2	Hypothesis: Concept, Types & Significance Research Design: Concept, Types and significance. Sampling: Concept, Types and Significance
Unit-3	Sources of Data Collection: Primary and Secondary, Field and Documentary. Tools of Data Collection: Interview guide, Interview schedule, observation and questionnaire. Methods of data Collection: Interview, Questionnaire, Observation, Case Study and Projective techniques.
Unit-4	Measurement and Scaling Processing of Data
Unit-5	Analysis and Interpretation of Data Report Writing
Practical	
References	<ol style="list-style-type: none"> Gupta, S.P., Statistical Methods, Sultan Chand and Sons, New Delhi, 1994 Jain, Gopal Lal, Research Methodology, Methods, Tools and Techniques, Mangal Deep Publications, Jaipur, 1998 Kothari, C.R.: An Introduction to Operational Research, Vikas Publishing House Pvt. Ltd, New Delhi, 1994 Wright, Susan E., Social Science Statistics Allyn and Bacon Inc., London, 1986 Wisniekwski, Mik, Quantitative Methods for Decision Makers, Mcmillan India Ltd., New Delhi, 1986.

Course ID	Course (Core)
MHSCC-205	Statistics and Computer Applications
Objectives	<ul style="list-style-type: none"> To understand the significance of statistics and research methodology in Home Science
Unit-1	Statistics: Meaning, Uses and Diagrammatic representation of Data Measures of Central Tendency Measures of Dispersion
Unit-2	Correlation: Karl Pearson's Rank Correction Coefficient Index Number
Unit-3	Probability: Concept and Theory Chi Square 't' test
Unit-4	Fundamentals of Computer: History of Computers, Generation of Computer, Language, Components, Applications of Computers. Operating System & Internet: MS-DOS, MS-Windows, and Internet
Unit-5	MS-Office: MS-Word, MS Excel, and Power Point. Introduction to Data Base Management Systems
Practical	
References	<ol style="list-style-type: none"> Basandra, S.K.: Computers for Managers, Designing An Effective Management Information System, Abhinav Publishing Industries, N.Delhi, 1965. Diwan, Parag, Information System Management, Deep & Deep Publications, New Delhi, 1997.

	<ol style="list-style-type: none"> 3. Laudon, Kenneth C. and London, Jane Price, Management Information System: A Contemporary Perspective, Macmillan Publishing Company, New Delhi. 4. Mehta, Versham Management Information System, Anmol Publications, New Delhi, 1998 5. Banerjee, Utpal K. and Sachdeva, R.K., Management Information System: New Framework, 6. Vikas Publishing House, Pvt. Ltd., New Delhi.
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Course ID	Course (Value added Course)
MHSVC-101	Fashion Designing
Objectives	<ul style="list-style-type: none"> • To understand the basics of fashion and designing through skill enhancement and garment components
Unit-1	<p>Fashion: Definition, history, elements, terminology, cycle, factors affecting fashion, fashion sources, fashion trends in India and abroad.</p> <p>Principles and elements of art in dress designing</p>
Unit-2	<p>Anthropometrical Measurement: Concept, importance, technique and precautions.</p> <p>Pattern Making: Methods of drafting, draping, flat pattern, techniques and uses</p>
Unit-3	<p>Commercial Pattern: Concept, selection, and use of commercial pattern</p> <p>Selection of Fabrics: Factors affecting selection of fabric for different garments, Calculating quantity of fabric needed for different garments</p>
Unit-4	<p>Different types of Stitches: Construction and decorative</p> <p>Different types of seams and seam finish</p>
Unit-5	<p>Layout Planning: Definition, types of layout, economy of fabric in placing patterns, adjusting fabric to pattern</p> <p>Fitting: Good fit – definition, principles and clues for good fit (ease, line, grain, set and balance)</p>
Practical	<ul style="list-style-type: none"> • Sheet preparation- dress designing according to theory syllabus. • Portfolio development on a special theme
References	<ol style="list-style-type: none"> 1. Tata, S.L. & Edwards, M.S. - The complete book of fashion illustrations, New York, Harper & Row Publications 2. Allen, Anne & Seaman, Julian - Fashion Drawing: basic principles, B.T. Batsford, London 3. Ireland John Patrick - Basic fashion design, B.T. Batsford, London 4. A bling bina, Fashion Sketch Book, Fairchild Publishers, New York 5. Seaman Julian - Professional Fashion illustration, B.T. Batsford, London 6. Farbey A.D. - How to produce successful advertising, Kogan Page India Pvt. Ltd. 7. Jethwaney, J.N. 1999 - Advertising, Phoenix Publishing House Pvt. Ltd. 8. Roundey N. & Mair, D - Strategies for Technical Communication, Little Brown & Co., Boston, Toronto

Course ID	Course (VNC)
MHSVNC-301	Garbh Sanskar
Objectives	<ul style="list-style-type: none"> • To understand the role of prenatal care. • To aware students about all stages of pregnancy and health issues.
Unit-1	<p>Prenatal Development: Meaning of prenatal Development, concept of conception, Process of conception, Early sign of pregnancy, symptoms of pregnancy, physiological changes during pregnancy, complication during pregnancy.</p>
Unit-2	<p>Sanskar: Scientific explanation of Garbh Sanskar, Different therapies in Garbh Sanskar, Garbh Samvaad, Fetal Communication to keep piece rapidly growing fetal brain mother establishes conversation with child in uterus by various means-Music, Storytelling, Thought</p>

	transfer, swadhyay Meditation
Unit-3	Care of pregnant women: Birth process. Maternal care. Nutrition during pregnancy. Dress during pregnancy.
Unit-4	Care of the mother after delivery: Ideal practices for the new mother. Role of health practitioner. Prenatal influences on fetus: family environment, social environment, maternal nutrition, age of mother.
Unit-5	Some essential activities during pregnancy. Yoga: Meaning and definition of yoga ,Role and importance of yoga as a Garbh Sanskar. Role of Ayurveda therapy during Pregnancy.
Practical	Presentation and seminars on special topics . Preparation of Teaching Aids-Chart-Poster, Leaflet -pamphlet ,Booklet, Flipchart etc.
References	1.Guyton,A.c.(1985):Function of the Human Body, 2.Gopalan.C.and Kaur S.(1989):Women and Nutrition in India, Nutrition Foundation in India. 3. Brijesh Shukl, Karm Kaumudi, Nag Publisher, New Delhi. 4.P.C. Mishra, Aj ka Vikasatamk Manovigyan, Sahitya prakashan , Agra