



Syllabus of M. A. in Home Science

Course Structure

FIRST SEMESTER

PAPERS CODE	PAPERS NAME	INTERNAL	EXTERNAL	TOTAL
MAHS101	Basics of Food & Nutrition	40	60	100
MAHS102	Clinical & Therapeutic Nutrition	40	60	100
MAHS103	Food Science & Nutrition	40	60	100
MAHS104	Practical-1 (Human Resource & Development)	60	40	100
Total		180	220	400

SECOND SEMESTER

PAPERS CODE	PAPERS NAME	INTERNAL	EXTERNAL	TOTAL
MAHS201	Textile & Clothing	40	60	100
MAHS202	Textile Designing	40	60	100
MAHS203	Extension Education	40	60	100
MAHS204	Practical-2 (Textile & Clothing)	60	40	100
Total		180	220	400

THIRD SEMESTER

PAPERS CODE	PAPERS NAME	INTERNAL	EXTERNAL	TOTAL
MAHS301	Statistics and Computer Application	40	60	100
MAHS302	Human Development	40	60	100
MAHS303	Nutrition of Women & Children	40	60	100
MAHS304	Practical-3 (Resource Management & Entrepreneurship)	60	40	100
Total		180	220	400

FOURTH SEMESTER

PAPERS CODE	PAPERS NAME	INTERNAL	EXTERNAL	TOTAL
MAHS401	Health & Fitness	40	60	100
MAHS402	Resource Management	40	60	100
MAHS403	Food Preservation	40	60	100
MAHS404	Project & Viva Voce	60	40	100
Total		180	220	400

Syllabus of M. A. in Home Science

SEM-1

1. MAHS101 Basics of Food and Nutrition

Course Contents:

Unit-1.

Concept of Nutrition–Food; Nutrients, Nutrition, Under and over Nutrition, Health.

2. Functions of Food.

3. Food groups, Balanced diet.

Unit-2.

Nutrients: Macro nutrients Classification, sources, functions Recommended dietary allowances Deficiency and excess (in brief) Water. Carbohydrates, Fats Protein, Fiber.

Unit-3.

Calcium Iron, Magnesium, Zinc, Fluorine Iodine, Selenium, Copper, Manganese Fat-soluble vitamins (A, D, E, K) Water soluble vitamins (Thiamine, Riboflavin, Niacin) Vitamin C, Folic acid Pyridoxine, Pantothenic acid, B12.

Unit-4.

Food Production (in brief), Food Composition Structure nutritional contribution and selection factors for the following Cereals and millets, Pulses Fruits Vegetables Milk and milk products, Nuts and oilseeds Meat, fish and poultry Eggs Sugar Tea, coffee, cocoa, chocolate and other beverages Condiments and spices Processed foods.

Unit-5.

Methods of Cooking, their Advantages and Disadvantages and Effect on Nutritive Value Improving Nutritional Quality of Foods Germination Fermentation Supplementation Substitution Fortification and enrichment.

Objectives:

1. Understand the functions of food and the role of various nutrients, their requirements and the effects of deficiency and excess (in brief).
2. Learn about the structure, composition, nutritional contribution and selection of different foodstuffs.
3. Be familiar with the different methods of cooking, their advantages and disadvantages.
4. Develop an ability to improve the nutritional quality of food.

References:

1. Robinson, C. H., Lawler, M. R. Chenoweth W. L. and Garwick, A.E. (1986): Normal and therapeutic Nutrition, 17th Ed., Macmillan Publishing Co.
2. Swaminathan, M. S. (1985): Essentials of Food and Nutrition VI: Fundamentals Aspects VII: Applied Aspects.
3. Hughes, O., Bennion, M. (1970): Introductory Foods, 5th Edn., MacMillan Company.
- Williams, S. R. (1989): Nutrition and Diet Therapy, 4th Edn., C.V. Mosby Co.

2. MAHS102 Clinical & Therapeutic Nutrition

Course Contents:

Unit-1.

Definition of Health & Nutrition:

Dimensions of Health (Physical, Psychological, emotional & Spiritual) Energy Requirements– Factors affecting energy requirements. BMR, Activity, age, climate, diet–induced

thermogenesis (SDA physiological conditions). Concept of nutritionally adequate diet and meal planning. (a) Importance of meal planning (b) Factors affecting meal planning Nutritional, Socio-cultural, Religious, Geographic, Economic, Availability of time.

Unit-2.

Nutrition through the life cycle. (At different activity and Socio-economic levels) requirements, nutritional problems, food selection: (a) Adulthood (b) Pregnancy (c) Lactation (d) Infancy.

Unit-3.

Principles of diet therapy Pre-school Adolescence Old Age Modification of normal diet for therapeutic purposes, full diet, soft diet, Fluid diet, Bland diet. Energy modification and Nutrition for weight management. Identifying the over-weight and obese an etiological factor contributing to obesity, prevention and treatment, low energy diets.

Unit-4.

Etiology, symptoms & diet management of the following:

1. Underweight–Ethology and assessment, high energy diet.
2. Diet for Febrile conditions & surgical condition. Nutritional Anaemia Fevers–Typhoid Diarrhoea, Constipation, Peptic ulcer, Jaundice, Viral Hepatitis, Cirrhosis.

Unit-5.

Diet in disease of the endocrine:

1. Pancreas–Diabetes mellitus–classification, symptoms, diagnosis, dietary case & nutritional, management of diabetes mellitus.
2. Insulin therapy, oral hypoglycaemic agents, special dietetic food, sweeteners & sugar substitutes, diabetic coma, Juvenile diabetes.
3. Disease of the cardio vascular system–Atherosclerosis Etiology & risk Factors.
4. Hypertension–Etiology, prevalence Nutritional management & prevention.
5. Renal diseases–Etiology, characteristic.
6. Symptoms & Dietary management of Glomerulonephritis Acute & Chronic.

Objectives:

This course will enable the student to-

1. Understand the concept of an-adequate diet and the importance of meal planning.
2. Know the factors affecting the nutrient needs during the life cycle and the RDA for various age groups.
3. Gain knowledge about dietary management in common ailments

References:

1. Krause, M. V. and Mohan, L. K. 1986: Food, Nutrition and Diet Therapy, alan R. Liss. Saunders Co.,London.
2. Passmore, R. and Davidson, S. 1986: Human Nutrition and Dietetics, Livingstone Publishers.
3. Robinson, C. H., Laer, M. R. Chenoweth, W. L. Ganwick, A. E. 1986: Normal and Therapeutic Nutrition, MacMillan Publishing Company, NewYork.
4. Williams, S. R. 1989: Nutrition and Diet Therapy, 4th Ed., C.V. Mosby Co.

3. MAHS103 Food Science & Nutrition

Course Contents:

Unit-1.

Weights and Measures, standard and household measures for raw and cooked food.

Unit-2.

Cereal and flour mixtures–basic preparations (15+3).

- i.) Boiled rice and rice pulao.
- ii.) Chapati, puri, paratha.
- iii.) Sandwiches.
- iv.) Pastas v. Pancakes, biscuits, cookies, cakes

Unit-3.

Pulses and legumes—using whole dehusked and sprouted.

Unit-4.

Vegetables Preparation of Simple salads, Dry vegetables & Curries.

Unit-5.

Planning and preparation of normal and therapeutic diet in relation to special nutrient requirements:

1. Infancy & Childhood.
2. Pregnancy & Lactation.
3. Constipation & Diarrhoea.
4. Under-weight & Overweight.
5. Peptic ulcer
6. Jaundice, Viral Hepatitis, Cirrhosis.
7. Acute glomerulonephritis.
8. Chronic glomerulonephritis.

Unit-6.

Diabetes mellitus:

- (i) With Insulin
- (ii) Without Insulin

Unit-7.

Hypertension, Atherosclerosis.

Objectives:

1. To acquire skills in food preparation techniques.
2. To use appropriate methods of cooking for preparation of specific food products.

4. MAHS104 Practical-1 (Human Resource & Development)

Course Contents:

Unit-1.

Visits to various centers, which cater to the preschool stage e. g. Day care center, Balwadi, Anganwadi, Mobile Crèches.

Unit-2.

Preparing a resource unit file on the basis of play way method/approach.

Unit-3.

Preparing teaching material kit and presentation in mock setup.

Unit-4.

Story and their techniques, types of puppets and mobiles. Art and craft portfolio, song booklet and low-cost musical instruments. Readiness games and material picture tails and object talk related materials etc.

Unit-5.

Tests of creativity torrance test of creative thinking (TTCT) Baqure Mehdi's Indian adaptation.

Unit-6.

Use of parne's 5 stage method creative problem solving.

Unit-7.

Use of consensual assessment technique to rate the creative work of children and adults (stories,

poems and art work).

Unit-8.

Conducting parent teacher meetings.

Unit-9.

Reports and resource files to be maintained by students.

SEM-2

5. MAHS201 Textile & Clothing

Course Contents:

Unit-1.

1. Classification of Textile fibers–Manufactures process, properties and uses of–Natural fibres–Cotton, Silk, Wool, Synthetic fibres–Polyester, Nylon, Acetate.

2. Types of yarns–Simple, Novelty, Textured yarn, Yarn formation–Mechanical and chemical spinning uses of yarns.

Unit-2.

Knitting–Types of knits–Warp & weft knit advantages and disadvantages of knits and their uses. Non-woven – Felts, Bonded fabric, their uses, Braiding.

Unit-3.

1. Finishes–Purpose of finishes.

2. General finishes–Scouring, Bleaching, Tentoring, Singeing and Sizing.

3. Special finishes–Mercirizing, special calendaring waterproof and water repellent fire proof wrinkle resistant, shrinkage control.

Unit-4.

1. Dyeing–Classification of dyes–Natural and Synthetic.

2. Different types and their suitability to different fibre, direct, acid, basic mordant, Vat Sulphur, Reactive acetate, Azo dyes and pigment colors.

3. Different dyeing methods–Fiber dyeing, yarn dyeing and piece dyeing.

Unit-5.

Principles of Clothing Construction General principles of clothing construction. Drafting and making paper patterns. Taking body measurements for different types of garments. Preparation of fabrics for garment making. Laying out of patterns, cutting and marking.

Objectives:

1. To develop understanding of different types at fibers, yarns and finishes.

2. To gain practical knowledge of dyeing, printing and weaving.

3. To develop the skills of making paper pattern for different types of garments.

6. MAHS202 Textile Designing

Course Contents:

Unit-1.

Experiments and principles of design:

i) Meaning methods of creating importance.

ii) Elements of principles of design as applied, to apparel designing.

iii) Harmony, balance proportion, Rhythm & emphasis.

Elements: Lines, shapes/forms.

Colour consideration: Definition, Dimensions, characteristics colour systems and colour schemes.

Unit-2.

Classification & Process of designing:

Structural Decorative Realistic Abstract Stylized Geometric Traditional Big & small design.

Unit-3.

Fashion–Definition:

- i) Fashion trends in India & Changes.
- ii) Theories.
- iii) Body Measurements-Tailoring tools and equipment's.
- iv) Methods of taking body measurements for different garments.
- v) Importance.

Unit-4.

Fashion Illustrations:

- i) Pattern making techniques.
- ii) Flat Pattern.
- iii) Drafting-Draping.
- iv) Disposals of fullness.
- v) Plackets.
- vi) Frill and gather.
- vii) Pleats and tucks.
- viii)Darts.
- ix) Patchwork.
- x) Seams and seam finishes.

Unit-5.

Fundamentals of Embroidery:

- i) Techniques, design colour, uses of different combination-threads.
- ii) Embroidery stick–Types.
- iii) Types of thread, needle, used for different fabrics.
- iv) Study of traditional Embroideries of India.
- v) Kasida of Kashmiri
- *Kantha of Bengal
- *Chichenkari of Lucknow
- *Kutch & kathiawan
- *Kasuti of Karnataka
- *Phulkari of Punjab
- *Gold & Silver (Zariwork)
- *Appliqué work.

7. MAHS203 Extension Education**Course Contents:****Unit-1.**

1. Concept of Education: (a) Meaning of Extension (b) Origin of Extension.
2. Extension Education Process: (a) Environment for learning (b) Role of educator (c) Role of the people participants.

Unit-2.

1. Concept of adult/non-formal education: (a) Meaning (b) Purpose.
2. Communication process.
3. Planning at different levels–National to Grassroots.

Unit-3.

1. Programmes to enhance food production: National food production programmes.

2. Poverty alleviation efforts: (a) Programmes for poverty alleviation for rural and urban areas.
(b) Current programmes for rural and urban poor.

Unit-4.

Programmes for women and children:

Women as target groups–specific measures for women and children such as DWCRA, ICDS, IMY. Current programmes for women as initiated and implemented by the different ministries and departments.

Unit-5.

Advertising Media:

1. Different media for advertising–print media, newspapers and periodicals. 2. Broadcast media–Television–Films.
2. Non-Media advertising.
3. Outdoor advertisement – Hoardings, Posters, Black Board, Bulletin Boards, Electronic signs, Letter bins, Aerial methods.

8. MAHS204 Practical-2 (Textile & Clothing)

Course Contents:

Unit-1.

Preparation of paper pattern for all age groups:

- a.) Creeping age
- b.) Preschools
- c.) For Children wear
- d.) For men's wear
- e.) For Ladies wear.

Unit-2.

Adoption of the basic block to various clothes & their stitching Saree–Blouses, Salwar, Chudidar Kameez, Petticoats, Frock.

Unit-3.

Making samples of traditional embroideries of India (any five):

- a.) Kashida of Kashmir.
- b.) Kantha of Bengal.
- c.) Kasuti of Karnataka.
- d.) Kutch Kathiawar.
- e.) Phulkari of Punjab.
- f.) Chikankari of Lucknow.
- g.) Gold & Silver (Zariwork).

Unit-4.

Free hand sketching of simple objects involving various shapes and forms.

Unit-5.

Drawing designs for various textile articles by adopting principles of design.

Unit-6.

Drawing and colouring a colour wheel.

Unit-7.

Painting designs with different colour schemes.

Unit-8.

Reducing & enlarging a design.

Unit-9.

Creating various textures.

Unit-10.

Identification of Textile Fibres: Visual, Microscopic, burning and chemical.

Unit-11.

1. Garment Construction: Drafting, cutting and stitching of simple garments, such as vest and bib.
2. Line Dress and Knickers. Sun suit /romper.

References:

1. Bane, A. 1974: Tailoring, MacgrawHill.
2. Bane, A. 1979: Flat pattern design, McgrawHill.
3. Brary Nathalie 1978: Dress Pattern Designing London, Crossby Lockwood & Staples.
4. Gillelle, D. A. Berte, B.: Figure Types and Size Ranges, Fairchild Publication.
5. Goublourn M. 1971: Introduction pattern cutting, Grading and Modelling, London, B. T. Batsford Ltd.
6. Goldsworthy 1980: Simple Dressmaking, Londown, Mills and BoonLtd.
7. Littman Conie 1977: Pattern making design, Litton Educational Publishing Inc.
8. Muka A. 1979: French Touch, Pittsburgh, Wolfson Publishing Co.,Inc.

SEM-3

9. MAHS301 Statistics and Computer Application

Course Contents:

Unit-1.

1. Statistics: Meaning, definition, scope, importance, characteristics, distrust of statistics.
2. Measurement of central tendency:
 - a.) Mean
 - b.) Median
 - c.) Mode.

Unit-2.

Graphic presentation of data: Importance, types.

- i) Histogram
- ii) Frequency polygon
- iii) Frequency curve
- iv) Correlation: Definition, meaning and types.
- v) Methods of determining coefficient of correlation:
 - *Product moment method.
 - *Rank correlation

Unit-3.

Introduction to computers What is computer? Characteristics, components of computer system, block diagram of computer, CPU, I/O devices and memory (RAM and ROM), secondary storage devices (Hard disk, floppy disk, magnetic tape etc.)

Analysis of variance - One way method: Direct and short-cut.

Unit-4.

Computer generations Classification of computer: Analog, digital, hybrid, general and special purpose computers.

Types of Computers: Micro, mini, mainframe and super computer. Chi-square test and goodness to fit. Application of student t test for small samples.

Unit-5.

Working with MS-Word:

1. Getting started with word, formatting text and paragraph. Applying text and language tools.

Designing pages with columns and tables, using graphics.

2. Methods of dispersion and variation:

- a.) Mean deviation
- b.) Standard deviation
- c.) Quartile deviation

10. MAHS302 Human Development

Course Contents:

Unit-1.

Early Childhood care and education ECCE:

- i.) Importance, need and scope of ECCE Objective of ECCE Type of preschools-play centers, day care, Montessori, kindergarten, Balwadi, anganwadi etc.
- ii.) ECCE in India Pre Independence Period, Post Independence-Kothari commission, Contribution of five years plan to ECCE Yashpal committee, Maharashtra preschool centre Act.

Unit-2.

- i.) Organization of preschool Centers. Concept of Organization and administration of early childhood centers.
- ii) Building and equipment: Location and site arrangement of rooms, different types and size of room, play-ground storage facility, selection of different types of indoor and outdoor equipments.
- iii.) Role and responsibilities of care giver/teacher. Record and Report. Types–aim and purpose/need, general, characteristic, e. g. anecdotal, cumulative sample work, medical etc.

Unit-3.

Childhood, creativity and counselling:

- i.) Early Childhood–characteristics, Developmental task skills of early childhood, Emotions during early childhood, Socialization and social behavior, Happiness and Hazards during early childhood.
- ii.) Late childhood–characteristics, developmental tasks, skills of late childhood, hazards and happiness of late childhood, moral Development. Theory of Kohlberg–behavior during late childhood.

Unit-4.

- i) Definition and concept of creativity types and degree of creativity (everyday creativity and eminent creativity Domains Insight and problem solving as related to creativity. Approaches to the study of creativity mystical approach (divine gift).
- ii) Psychology dynamical approach (Freud).
- iii) Psychometric approach (Guilford and Torrance).
- iv) Cognitive approach (Weisberg).
- v) Social personality approach (Weisberg).
- vi) Social personality approach (Mackinnon).
- vii) Confluence approach (Gardner–enhancing creativity–Brain Storming problem solving, creative dynamics and visualization.)
- viii) Counseling - History of counseling Meaning.
- ix) Need, Objectives, Functions, Qualities and Skills of counselor, Distinction, between Guidance and counselling.

Unit-5.

- i) Puberty and adolescence Puberty.
- ii) Characteristics causes of Puberty, Primary and Secondary Sex Characteristics, Developmental, Tasks, problems during puberty, Happiness and interest, Vocational interest, self-discipline and family relationship, Adolescence.

iii) Characteristics, Developmental Tasks, physical changes, during Adolescence, sex interest and sex behavior and causes of family during adolescence, Hazards and Happiness. Mental health needs: Sense of identity autonomy, individualism, problems related to physical appearance development and relationship. Problems related to sexuality.

Reference:

1. Child Development by Elizabeth Hurlock.
2. Developmental psychology by Elizabeth Hurlock.
3. Nursery school by Katherina Read.
4. Nursery in India by Pramila Barookh.
5. The psychology of Adolescents–A.T. Jersild 7th Edition Prentic Hall.

11. MAHS303 Nutrition of Women and Children

Course Contents:

Unit-1.

1. Role of women in national development.
2. Women in family and community: Demographic changes, menarche, marriage, fertility, morbidity, mortality, life expectancy, sex ratio, ageing, widowhood.

Unit-2.

Women and health:

1. Policies and programs for promoting maternal and child nutrition and health.
2. Concept of small family. Methods of family planning, merits and demerits.

Unit-3.

Importance of Maternal Nutrition:

1. Importance of Nutrition prior to and during pregnancy–prerequisites for successful outcome. Effect of under nutrition on mother and child including pregnancy outcome and maternal and child health – short term and long-term effect.
2. Nutritional requirements during pregnancy:
Adolescent pregnancy, pregnancy and T. B., IUGR, gestational diabetes.

Unit-4.

1. Lactation: Development of mammary tissue and role of hormones. Physiology and endocrinology of lactation–Synthesis of milk components–lactation, effect of breast feeding on maternal health.
2. Human milk composition and factors effecting breast feeding. Human milk banking.
3. Management of Lactation: Prenatal breast feeding, skill education, Rooming in problems- sore nipples engorged breast, inverted breast.

Unit-5.

1. Infant physiology: Pre-term and low birth weight infant–implication for feeding and management.
2. Feeding of infants and children and dietary management.
3. Malnutrition–Etiology and management.

12. MAHS304 Practical-3 (Resource Management & Entrepreneurship)

Course Contents:

Unit-1.

Designing of Terrace Garden.

Unit-2.

Designing of partly outdoor & Indoor Landscaping.

Unit-3.

Bonsai.

Unit-4.

Drawing house plan for various income groups.

Unit-5.

Drawing sketching of interior decorative aspect like–interior schemes of room.

Unit-6.

Study of building materials.

Unit-7.

Preparation of art object.

Unit-8.

Floor decoration–Alpna, Rangoli.

Unit-9.

Flower arrangement.

SEM-4**13. MAHS401 Health & Fitness****Course Contents:****Unit-1.**

1. Definition, components of fitness: (a.) Anatomical fitness (b.) Physiological fitness (c.) Psychological fitness.
2. Physiological fitness: (a) Growth and development (b) Strength (c) Speed (d) Skill (e) Stamina or endurance, specific fitness, general fitness and health status.
3. Holistic approach to the management of fitness and health: Energy input and output, physical fitness and health inter-relationship.

Unit-2.

1. Review of different energy systems for endurance and power activity: (a.) Endurance: Definition, classification of endurance, factors effecting endurance. (b.) Fuels and nutrients to support physical activity.
2. Nutrition in sports: Sports specific requirement.

Unit-3.

1. Pre game and Post game meals. Assessment of different mutagenic acids commercial supplements.
2. Diets for persons with high energy requirement, stress. 3. Water electrolyte balance: Effect of dehydration.

Unit-4.

1. Significance of physical fitness in the prevention and management of: (i.) Diabetes mellitus (ii.) Cardiovascular disorders (iii.) Bone health and obesity.
2. Nutrition and exercise regimes for pre and post-natal fitness.

Unit-5.

1. (A.) Defining nutritional goals/guidelines appropriate to health and prevention and management of the chronic degenerative disorder: (a) Cardiovascular disorders (b) Diabetic mellitus.
(B.) Various dietary regimes for weight reduction.
2. Alternative systems for health and fitness like Ayurveda, yoga.

Objective:

This course will prepare the students to:

1. Understand the components of health and fitness and the role of nutrition.

2. Make nutritional, dietary and physical activity recommendations to achieve fitness and well-being.
3. Develop ability to evaluate fitness and well-being.

14. MAHS402 Resource Management

Course Contents:

Unit-1.

1. History of housing:
 - i) Concept of housing.
 - ii) Changes in housing need and standards.
 - iii) Housing values and goals at the present time.
2. Housing in India as affected by trends in:
 - i) Population
 - ii) Economics Status.
 - iii) Occupation and family mobility.
 - iv) Social and cultural status.

Unit-2.

1. Cost of house and finance for housing:
 - i) Factors influencing house.
 - ii) Estimation of the cost of housing.
 - iii) Ways to control and economizing the cost of housing.
 - iv) Different public and private loan scheme for housing.
2. Concept of Vastu shastra in housing:
 - i) Historical background - Placement of rooms.
 - ii) Location of wall - Placement of doors.
 - iii) Placement of accessories.

Unit-3.

1. Landscaping–Importance: Approaching, landscape design with an artistic touch space, line, form, texture, color, balance, rhythm, scale and proportion.
2. Bonsai:
 - i) History
 - ii) Preparation of soil.
 - iii) Selection of plants.
 - iv) Potting and repotting.
 - v) Selection of containers.
 - vi) Care

Unit-4.

1. Furniture:
 - i) An important component of interiors.
 - ii) Modern trends-wrought iron, nu-wood, syntax, press –woods, cane and molded furniture.
2. Home Furnishing:
 - i) Window Treatment.
 - ii) draperies
 - iii) curtains
 - iv) roller shades
 - v) valences
 - vi) Venetian blinds
 - vii) Upholstery fabrics.
 - viii) Selection of fabrics.

- ix) Wall treatment
- x) wall paper, paints, tiles.
- 3. Accessories: (a.) hanging (b.) relation of pictures to room other accessories.

Unit-5.

1. Environment Management:
 - i) Fundamental principles of environment and natural re-sources management.
 - ii) Basic concept of ecology and its application in industrial ecology.
2. Role of International organizations in environment management.

Objectives:

To enable students to –

1. To recognize the family needs in relation to housing responsibilities, housing and interiors.
2. To acquire basic knowledge of principles involved in residential houses and its interiors.
3. To provide knowledge of the principles and methods of creating attractive interiors.

15. MAHS403 Food Preservation

Course Contents:

Unit-1.

1. Food and It's Preservation.
2. Home and Community level Including commercial operations.
3. Principles of food preservation.
4. Causes of spoilage of food.

Unit-2.

1. Fresh food storage.
2. Principles Plant product.
3. Storage, animal product.
4. Storage. Effect of Storage.
5. Condition on Quality.
6. Canning–Principles and methodology influence of caning on food quality storage of canned foods.

Unit-3.

Pasteurization:

1. Effect of food quality.
2. Storage of pasteurized food.
3. Drying & Dehydration Methods Used and effect on food quality. Types of driers. Storage and deterioration of dehydrated food products.

Unit-4.

Use of low temperature Refrigeration and freezing methods, principles and application, preparation of foods for freezing influence on food components and structure self-life of frozen foods. Fermentation Pickles, Chutneys, ketchups sauces, fermentation-types, products and method uses Establishment of a small scale–industry/cottage industry.

Unit-5.

Chemical Preservatives Preparation of Fruit, Juices squashes, Fruit Syrups, Cordials, Jam, Jelly. High Acid & High Sugar Products Common defects, Preservation of crystallized and glazed fruits Nutritional Implications of food processing Causes for loss of vitamins and minerals. Enrichment. Restoration and fortification.

Reference:

1. Oser. B. L.1965: 14 Ed Hawk's Physiological Chemistry, MC Graw Hill Book Co.

2. William S.: 16 The Ed JAOAC Official Methods of Analysis Part I to XI, Manak Bhawan New Delhi.
3. West E.S. Todd W.R. Mason, H. S. and Van Barageen J. T. 1974 4th Ed Text book of Biochemistry, Amerind publishing Co. Pvt. Ltd.
4. Devlin, T. M. 1986: 2nd Ed. Textbook of Biochemistry with clinical Correlations John witey and sons.
5. Murray R. K. Granner, D.K. Mayes P.A. Nd Rodwell V.W. 1993: 23rd Ed. Harper's Biochemistry Large Medical Book.

16. MAHS404 Project & Viva Voce

Course Contents:

Unit-1.

Preparation of preliminary Project Report.

Unit-2.

Visit, Project Report of Small-scale industries.

Unit-3.

Conduction of Market survey.