

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
M.Sc. (Home Science)
MASTER OF SCIENCE [HOME SC. (GENERAL)]

Semester- VII

| Theories/ Practical | Major | Subject Name | Credit (28) |
|--------------------------------|--------------|---|--------------------|
| Theory | 1 | Research Methodology Part I | 4 |
| Theory | 2 | Basic of Food Science | 4 |
| Theory | 3 | Child Psychology | 4 |
| Theory | 4 | Extension Education in Home Science | 4 |
| Practical | 1 | Extension Education in Home Science | 4 |
| Elective/Minor | | Nutrition for Health and Physical Fitness | 4 |
| | | or | |
| | | Guidance or Counselling | 4 |
| | | or | |
| | | Communication & Extension Education in Home Science | 4 |
| Research | 1 | Research/ Project | 4 |

Semester- VIII

| Theories/ Practical | Major | Subject Name | Credit (24) |
|--------------------------------|--------------|--------------------------------|--------------------|
| Theory | 1 | Research Methodology Part II | 4 |
| Theory | 2 | Fashion dynamic | 4 |
| Theory | 3 | Ergonomics | 4 |
| Theory | 4 | Clinical Nutrition & Dietitics | 4 |
| Practical | 1 | Clinical Nutrition & Dietitics | 4 |
| Research | 1 | Research/ Project | 4 |

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VII

Paper : First

Subject- Research Methodology (Part 1)

Course : Major (Compulsory)

Credit - 4 (Theory)

Objectives

1. To have a basic knowledge about Research and its Methodologies
2. To identify and define appropriate Research problems

Unit I Introduction to Research

- a. Meaning, definition, nature and area of Research in Home Science.
- b. Objectives, scope of Research and types of Research.
- c. Significance and limitation of Research.

Unit II Selection of Research Problem

- a. Definition and identification of Research problem.
- b. Selection of research problem.
- c. Importance of problem formulation.
- d. Source and types of research problem.

Unit III Methods and tools of Data collection

- a. Meaning and definition of data.
- b. Sources and types of data.
- c. Importance and limitation of data.
- d. Methods and tools of data collection.

Unit IV Sampling Design

- a. Meaning and definition of sampling.
- b. Merit and demerit of sampling.
- c. Characteristics of good sample design.
- d. Classification of sampling techniques.

References:

1. C.R. Kothari, Research methodology, methods and techniques Wiley eastern Ltd.- new
2. C.B. Gupta V. Gupta An introduction to statistical methods Vikas Publishing House Pvt. Ltd.
3. D.N Elhance, fundamentals of statistics

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VII
Paper : Second
Subject : Basic of Food Science

Course : Major (Compulsory)

Credit - 4 (Theory)

Objectives:

1. Obtain knowledge of different food groups, their composition and role in diet.
2. To gain knowledge of different plant and animal derived foods and their nutritive values and properties.

Unit I Introduction and concept of food science

- a. Basic concept of food, nutrition nutrients and therapeutic diet.
- b. Carbohydrates- Introduction and functions of carbohydrate.
- c. Classification of carbohydrate.
- d. Occurrence and Biochemical importance of carbohydrate.
- e. Sources daily requirement and effect of too high and low CHO on health.

Unit II Lipids

- a. Introduction and general functions of Lipids.
- b. Classification of Lipids.
- c. Essential and Non-Essential fatty acids and their importance.
- d. Sources, daily requirement and nutritional significance of PUFA, MUFA, SFA and W-3 fatty acids.

Unit III Proteins and amino acids

- a. Introduction, origin and functions of proteins.
- b. Meaning of amino acids and their classification.
- c. Essential and non-essential amino acids.
- d. Factors affecting protein bio availability including anti-nutritional factors.
- e. Source acids daily requirement and assessment of protein quality (BV, PER, NPU).

Unit IV Vitamins and minerals

- a. Define vitamins and minerals.
- b. History of vitamins and minerals.
- c. Types and uses of vitamins and minerals.

References:

1. Food science, Chemistry and Experimental foods by M. Swaminathan
2. Food Science by Norman.N.Potter.
3. Experimental study of Foods by Griswold R.M.)
4. Food Science by Helen Charley
5. Foundation of Food Preparation by A.G. Peckam
6. Modern Cookery for teaching and trade. volume 1&11, Thangam Longmars Lud Philip. Orient
7. Food Fundamentals by MacWilliams, John Willy and son's, New York. & Food Facts & Principles by Shakunthala munay & Shadakhraswamy,
9. Food Science by Srilakshmi, second edition,2002

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.

for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VII

Paper : Third

Subject- Child Psychology

Course : Major (Compulsory)

Credit - 4 (Theory)

Objectives:

1. To enable the students to understand about child psychology
2. Help the students in understanding of developmental aspects of child at different stages

Unit I : 1. Introduction to Psychology

- a. Historical Perspective.
 - b. Emergence of Child Psychology as a Scientific discipline.
 - c. Techniques of Child Study, Longitudinal, Cross sectional, experimental, Case Study, Interview and Observation.
- 2. Genetic Biological Basis of Development**
- a. Influence an Physical, Physiological and intellectual characteristics.
 - b. Effect of premature and birth weight on the different facets of child's Personality.

Unit II Psychological Development

- a. **Infancy**- Importance of early social experience, mothering attachment (Bowl by), maternal deprivation, role of care giver and consequence of the interaction with care giver.
- b. **Pre-school age**-Effect identification and sex typing on the child's behavior, role of family with special reference to rewards and punishments.
- c. **School age**-Important influence on development of child.

Unit III Development of Child

- a. Language Development.
- b. Cognitive Development.
- c. Emotional Development.
- d. Personality Development.

Unit IV Child Development perspective

- a. Focus on all round Development.
- b. Individual needs/group needs.
- c. Neglected areas of Child Development creativity, Language and concept formation.
- d. Assessment and monitoring in preschools: programmers children.

References:

1. L. Alan Sroufe, Robert, G. Cooper: Child Development- Its Nature and Course, Ist Ed. 1988
2. Boston, Allyn & Bacon: Child Development, 1989
3. Peter, K. Smith & Helen Kowie : Understanding Children's Development, Smikow 30077, New York, Basil Block, 1988 Rober
4. S. Feldman: Understanding Psychology, McGraw Hill Book co., New York, 1987

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.

for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VII

Paper : Fourth

Subject : Extension Education in Home Science

Course : Major (Compulsory)

Credit - 4 (Theory)

Objectives:

1. To develop an understanding regarding various types of media and their role in Home Science Extension
2. To develop skill in producing and using selected media in Extension work

Unit I Introduction to Extension Education in Home Science

- a. Objectives of extension education.
- b. Principles of extension education.
- c. Functions of extension worker.
- d. Qualities of extension worker.
- e. Role of extension worker.
- f. Role of Home Science extension education in national development.

Unit II Community Development

- a. Origin, Organization and function of community development.
- b. Growth and Development of Panchayati Raj.
- c. Rural Institutions of India. "Village school, Mahila mandal, Youth clubs

Unit III Programme planning

- a. Programme Planning: Principles and importance in extension.
- b. Evaluation of Programme.

Unit IV Home Science for Rural Development

- a. Role of Home Science in solving issues of illiteracy, poverty and health.
- b. Home Science Extension workers for Rural Development and Characteristics of extension workers.

References:

1. Ray, G.L., Extension Communication and management, 1999, Nays Prakashan, Calcutta.
2. Berlo, D.K.: The Process of Communicating –An Introduction to Theory and Practical, 1960, New York, Henry Holt and Company.
3. Chopra, K., Kaukodi, G.K., & Murty, M.N.: Participatory Development, 1990. Sagar Publication.

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VII

Subject : Extension Education in Home Science

Course : Major (Compulsory)

Credit - 4 (Practical)

1. Production of selected media in Home Science Extension and Pre testing of the selected media.
2. Use of Selected media in the field.
3. Developing skill in any of the folk media.
4. News and report writing of programme for farm/slum women.

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester - VII
Course Name : Nutrition for Health and Physical Fitness

Course : Minor (Elective)

Credit - 4 (Theory)

Course Outcome

1. To Introduce the fundamental concept of physical education, health and fitness
2. To provide a general understanding on nutrition, first aid and stress management
3. To familiarize the students regarding yoga and other activities for developing fitness

Unit I Concept of Physical education and health

- a. Definition, Aims and Objectives of physical education.
- b. Modern concept of health, physical fitness and wellness.
- c. Components and types of physical fitness.

Unit II Yoga and Stress Management

- a. Asana and its effects
 - Padmasana
 - Halasana
 - Bhujangasana
 - Shavasana
 - Vajrasana
 - Trikonasana
 - Padahasthasana
- b. Postural deformities- corrective measures.
- c. Stress management and relaxation techniques.

Unit III Role of Macronutrients

- a. **Energy** - Release of energy from macronutrients, Energy metabolism during exercise and Energy requirements for physically active persons.
- b. **Carbohydrate and Proteins** - Effect of exercise on carbohydrate metabolism, pre, during and post CHO intake in diet and amino acid metabolism during exercise, effect of protein on exercise performance, ingestion of protein before and after exercise.
- c. **Lipids** - Fat metabolism during exercise with special reference to the type and intensity of exercise. Nutritional strategies to enhance oxidation of fat during exercise.

Unit IV Effect of exercise on fluid and electrolyte balance:

- a. Fluid imbalances- dehydration and over hydration and importance of sports drinks.
- b. Micronutrients and exercise.
- c. Nutritional problems in physically active person.

Selected Readings

1. Harold M Barrow “Man and Movement: Principles of Physical Education” published in Great Britain by Henry Kimpton Publishers, London.
2. Jesse Peoring Williams “The Principles of Physical Education” Published by College Book House, Shivaji Road, Meerut.
3. William D McArdle, Frank I Katch and Vitor I Katch, Essential of Exercise Physiology, Second edition, New York: LipincoffWilliams and wilkins, 2000
4. Arthar C. Guyton, Physiology of Human Body, Philadelphia: Saunders Company, 1972.

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester - VII
Course Name : Guidance and Counselling

Course : Minor (Elective)

Credit - 4 (Theory)

Course Outcome

1. To understand the principles and strategies for guidance and counselling across the life span
2. To learn the concept of guidance counselling and therapy, its process, qualities and responsibilities of counsellors

Unit I **Concept of Guidance & Counselling** - Meaning, Principles, Nature and Need of Guidance, Characteristics, Objectives and Process of Counselling.

Unit II **Types of Guidance** - Meaning, Steps, Principles & Advantages of Educational, Vocational & Personal guidance.

Unit III **Types of Counselling** - Psychological Counselling, Psychotherapeutic, Clinical, Marriage, Vocational, Students & Placement.

Unit IV **Techniques of Counselling** - Interview Techniques, Group Counselling Techniques, Diagnostic and Clinical Techniques.

Selected Readings

1. Ram Nath Sharma, Rachana Sharma, (2018) Guidance & Counselling in India, Atlartic publishers and Dist.
2. Asha K Kinra (2008), Guidance & counselling, Dorling Kindersley (India) Pvt. Ltd., Jai Narain Vyas University, Jodhpur

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VII

Subject- COMMUNICATION AND EXTENSION IN HOME SCIENCE

Course : Minor (Elective)

Credit - 4 (Theory)

Objectives:

1. To develop an understanding regarding the Extension process
2. To develop an understanding regarding various types of media and their role in Home Science Extension

Unit I Introduction to Extension Education in Home Science

- a. Objectives of extension education.
- b. Principles of extension education.
- c. Functions of extension worker.
- d. Qualities of extension worker.
- e. Role of extension worker.
- f. Role of Home Science extension education in national development.

Unit II Extension Teaching Methods

- a. Methods of Extension Teaching.
- b. Audio Aids.
- c. Visual Aids.
- d. Audio-Visual Aids.
- e. Adoption and innovation of diffusion.

Unit III Introduction to Communication

- a. Origin, Concept, definition, nature of Communication.
- b. Models of communication.
- c. Levels of communication and Channel of Communication.
- d. Effective communication- Frame of reference, perception, fidelity, communication gap, time lag, empathy, homophily, heterophily.
- e. Functions of communication & Problems of Communication.

Unit IV Developmental Communication & Appropriate Technology for Women

- a. Understanding the role of traditional and modern media in developmental communication.
- b. Participatory approach in developmental communication (PRA & RRA).
- c. Transfer of technology and factors affecting TOT.
- d. Role and status of women in Rural development.
- e. Need of Appropriate technology for women.

References:

1. Ray, G.L., Extension Communication and management, 1999, Nays Prakashan, Calcutta.
2. Tiwari, LP : Communication, Technology and Development, 1987.
3. Indian Ministry of Information & Broad Casting : Mass Media in India, 1985.
4. Dhama, O.P. & Bhatnagar, O.P. : Education and Communication for Development,

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VIII
Paper : First
Subject- Research Methodology (Part IInd)

Course : Major (Compulsory)

Credit - 4 (Theory)

Objectives:

1. To develop an ability in students to design a research report and assist the students to collect and analyze data
2. To enable the students to generalise the data and justify the result with the help of statistical analysis

Unit I Hypothesis

- a. Meaning and definition of hypothesis.
- b. Characteristics or requirements of good hypothesis.
- c. Kinds of hypothesis and sources of hypothesis.
- d. Methods of testing the significance of hypothesis.

Unit II Research Report

- a. Meaning of Research report.
- b. Types of Research report.
- c. Presentation or layout of research report.
- d. Characteristics of a good research report.

Unit III Analysis and Presentation of Data

- a. Meaning and importance of content analysis.
- b. Classification and tabulation of data.
- c. Types of data Presentation.
- d. Advantages or disadvantages of data presentation.

Unit IV Measure of Central Tendency

- a. Meaning and importance of Measures of Central Tendency.
- b. Measures of dispersion- Range, Mean deviation, SD, Quartile deviation, C.V., skewness and kurtosis.

Reference:

1. C.R. Kothari, Research methodology, methods and techniques Wiley eastern Ltd.- new.
2. C.B. Gupta V. Gupta An introduction to statistical methods Vikas Publishing House Pvt. Ltd.
3. Kulbir Singh, Sidhu Methodology of Research in education, sterling Publisher Pvt. Ltd. New Delhi.
4. Arun Kumar, Research Methodology, Anard Publications, Meerut.

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VIII
Paper- Second
Subject- Fashion Dynamic

Course : Major (Compulsory)

Credit - 4 (Theory)

Objectives:

1. To understand the dynamics of fashion and role CAD & CAM in fashion industry
2. To learn about the designers of international and national fame and their contribution to the fashion of today

UNIT 1 Fashion Concepts

- a. Fashion terminology, principles of fashion.
- b. Theories of fashion adoption and fashion cycle.

Unit II History of Fashion

- a. Factors determining fashion trends.
- b. International and Indian fashion designers.
- c. Fashion careers, creating fashion display, futuristic trends in fashion their anticipation and implementation.

Unit III Role of CAD and CAM in Fashion Industry

- a. Importance and role of CAD-CAM in fashion industry.
- b. Working tool : creating and editor points, notches lines and pieces.
- c. Different types of CAD systems available in the market today.

Unit IV Sociological Aspects of Clothes in Terms of Fashion

- a. Role of uniforms national costumes and occupational clothes.
- b. Social importance of clothes.
- c. Factor influencing choice of clothes, physical, aesthetic, economic and social.
- d. Psychological effects of colour in clothes.

References:

1. Choi, K. H. (2019). Digitalized dynamic fashion illustration, using motion graphics. Proceedings of international conference on fashion communication: Between tradition and future digital developments, pp. 9-20. Cham: Springer.
2. Makryniotis, T. (2018). Fashion and costume design in electronic entertainment - Bridging the gap between character and fashion design. *Fashion Practice*, 10(1), 99-118.
3. Worbin, L. (2010). Designing dynamic textile patterns. Borås: University of Borås. Retrieved from <https://www.diva-portal.org/smash/get/diva2:876942/FULLTEXT01.pdf>

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VIII
Paper : Third
Subject- Ergonomics

Course : Major (Compulsory)

Credit - 4 (Theory)

Objectives:

1. To make an understanding and application of ergonomics in home and allied sectors
2. To develop the ability in students to make their career in various field

Unit I Ergonomics

- a. Scope of ergonomics in Home and other occupations.
- b. Nature of work in household and other occupation.
- c. Interdisciplinary and applied nature of ergonomics as a field of study.
- d. Man Machine Environment system.

Unit II Ergonomics in work place (Elbow room)

- a. Anatomical Dimensions and its relation to space needs.
- b. Postures at work and their effect on health.
- c. Anthropometric Measurements for different postures, standing and sitting.
- d. Work space and storage needs.
- e. Functional design of work places equipments and tools.

Unit III Enviromental Factors

- a. Noise- Guidelines on noise, noise reduction at source, noise reduction through work place, design and work organization, hearing conservation.
- b. Light- Guidelines on light intensity, guidlines on brightness differences improved lighting.

Unit IV Work Organization Jobs and Tasks

- a. Definition and importance of work.
- b. Improving Quality of life through work.

References:

1. Deaeon, R.E. and Fire Baugh, F.M.: Resource management, principles and applications, Allyn and Bacon, 1981.
2. Dewitt, R.J. and Singh: Indian Economics, Premier Publishing Co. Bombay
3. Sundaram, K.P.M. and Versha, N.G.: Principles of Economics, Agra.
4. Chakraborty, S.K.: Mannagement by objectives- integral approach, MacMillan Co. 1980.
5. Drucke, P.: Managment: Task, responsibilities and practices, Allied publisher.

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VIII
Paper : Fourth

Subject- Clinical Nutrition and Dietetics

Course : Major (Compulsory)

Credit - 4 (Theory)

Objectives:

1. To understand the effected various disease on nutritional status, nutritional and dietary requirement
2. To be able to recommend and provides appropriate nutrition care for prevention and treatment of various disorders

Unit I Introduction to Clinical Nutrition

- a. Definition and introduction to Clinical Nutrition.
- b. Nutrition care process (NCP).
- c. Nutritional Assessment by Direct, Indirect and dietary methods.
- d. Nutrition Intervention and evaluation.
- e. Patient care and counselling.
- f. Role of dietitian in Hospital.

Unit II Nutrition in metabolic diseases

- a. Introduction, Prevalence, Etiology and classification of diabetes mellitus, Hypertension.
- b. Metabolic aberration, Symptoms, diagnosis and complication.
- c. Dietary management, different therapies for management, education and prevention.

Unit III Metabolic effect of Cancer and Renal diseases

- a. Cancer- Cancer cachexia, Anorexia, nutrition effects of cancer therapy, surgery, radiation therapy, chemotherapy, immune therapy, nutrients and their relationship with cancer.
- b. Renal diseases- Acute and chronic renal failure and dietary management in End stage renal failure and dialysis.

Unit IV Nutrition care in Cardiovascular disease and weight management

1. **Cardiovascular Disease:** Introduction, types and nutritional management in cardiovascular diseases.
2. **Nutrition and weight management :** Introduction to obesity, over weight and under weight.
3. Eating disorders and nutritional management in obesity, over weight and under weight.

Reference:

1. Anita, F.P.: Clinical Dietetics and Nutrition, Oxford Univ. Press UJ ed. 1989.
2. Shills, M.E. and Young, V.R.: Modern Nutrition in Health and Disease.
3. K.M. Varghese Company, Bombay, VIIed. 1988.
4. Joyar M.C and Keteroon: Nutrition and Disease.
5. Comparative Aspects of Nutrition and Metabolic Diseases- CRC Press.

Syllabus developed
According to NATIONAL EDUCATION POLICY 2020
C.B.C.S.
for
SUBJECT : HOME SCIENCE
MASTER OF SCIENCE [HOME SC. (GENERAL)]
Semester : VIII

Subject- Clinical Nutrition and Dietetics

Course : Major (Compulsory)

Credit - 4 (Practical)

1. Assessment of Nutritional Status by different methods-direct, indirect and dietary methods.
2. Planning, calculation and preparation whole day diet in metabolic diseases- diabetes mellitus and Hypertension.
3. Planning, calculation and preparation whole day diet for-
 - a. Cardiovascular disease.
 - b. Weight management.
 - c. Cancer and Renal disease.
4. Planning, calculation, preparation, services, evaluation and dietary counseling for the therapeutic diets, covered in theory the practical includes block placement of the students in the real work situations of hospitals: Medical ward, Dietary department for 6 to 8 wks