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Semester wise syllabus for Post Graduates
As recommended by board of studies
Govt. K.R.G. P.G. Autonomous College Gwalior M.P.
M.Sc. (Home Science)
Food and Nutrition
SEMESTER - III
PAPER-I
Advanced Nutrition
20 -18 -19

M.M. 100

Objectives

The course is designed to:

- Provide in depth knowledge of the physiological and metabolic role of various nutrients and their interactions in human nutrition.
- Enable students to understand the basis of human nutritional requirements and recommendations through the life cycle.
- Familiarize students with the recent advances in nutrition.

UNIT-I

Energy: Energy content of food. Physiological fuel value-review. Measurement of energy expenditure, BMR thermic effect feeding and physical activity. Methods of measurement. Estimating energy requirement of individual and groups. Regulation of energy metabolism: control of food intake, digestion absorption and body weight.

UNIT-II

Carbohydrates: Digestion and transport review-dietary fibre fructooligosaccharides, resistant starch-chemical composition and physiological effects, Glycemic index of foods. Sweeteners-nutritive and non-nutritive.

Non-nutritive food components with potential health effects: Polyphenols, tannis, phylate, phytoestrogens. Cyanogenic compounds, lectins and saponins.

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UNIT-III

- (a) **Proteins:** Digestion, absorption transport-review, Metabolism of proteins, Role of muscle, liver and gastrointestinal tract.
Protein quality; methods of evaluation proteins needs. Therapeutic application of specific amino acids: Branched chain, glutamine arginine homocysteine, cysteine.
- (b) Nutritional regulation of gene expression
- (c) Inborn errors of metabolism: Sickle cell Anaemia, Thallasaemia, Cystinuria, Phenylketouria, Hereditary Lactose intolerance, crout.

UNIT-IV

~~Lipids:~~ Digestion, absorption transport review.

Functions of essential fatty acids. Role of n-3, n-6 fatty acids. Prostaglandins. Fat requirements.

Minerals: Note: For each nutrient sources bioavailability, metabolism, function, determination of requirement RDI/ESADDI, deficiency and toxicity, interactions with nutrients are to be discussed.

Macro minerals: Calcium, phosphorus. Magnesium sodium, potassium and chloride.

Micro minerals: Selenium, cobalt, Chromium, vanadium, silicon, boron, nickel.

UNIT-V

1) **Vitamins:** Historical Background, structure food sources, absorption and transport, metabolism, biochemical function, assessment of needs, interaction with other nutrients
Physiological, pharmacological and therapeutic effect toxicity and deficiency with respect to following:

- (i) Fat soluble: Vitamin A, D, E & K
- (ii) Water soluble: Thiamine, riboflavin, niacin, biotin, pyridoxine, folic acid, panthothenic acid, ascorbic acid, cyanocobalmin, choline, Inositol.

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M.Sc. (Home Science)

Food and Nutrition
SEMESTER-III

PAPER-II

Clinical and Therapeutic Nutrition

20 -18-13

M.M. 100

Objectives

The course will enable the students to:

- Understand the etiology, physiologic and metabolic anomalies of acute and chronic diseases and patient needs.
- Know the effect of various diseases on nutritional status and nutritional and dietary requirements.
- Be able to recommend and provide appropriate nutritional care for prevention and treatment of various diseases.
- Orient the students with all the important state of the art methodology applied in nutritional assessment and surveillance of human groups.
- Develop specific skill to apply the most widely used method.

UNIT-I

(A) Role of dietitian

- (a) Responsibilities of nutritional counselor.
- (b) Communication of dietary advice, skills of communication.
- (c) Motivation of patients.
- (d) Teaching and used in dietary advice.

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(B) Principles of nutritional care

- (i) Nutritional care process
 - (a) Assessment
 - (b) Objectives of nutritional care
 - (c) Implementation of nutritional care
 - (d) Evaluation of nutritional care.

(C) Nutritional Intervention

- (1) Current methodologies of assessments of nutritional status in clinical situation their implementation and comparative application for the following:
 - (a) Food consumption
 - (b) Anthropometry
 - (c) Clinical assessment
 - (d) Laboratory tests
- (2) Assessment of patients nutritional needs
 - (a) Dietary calculations
 - (b) Meal exchange system
 - (c) Diet prescription
- (3) Diet Modification
 - (a) Adequate normal diet as bases for therapeutic diet.

Unit-II

(A) Nutritional care of hospitalized patients

- (1) Identification of high risk patients.
- (2) Assessment of patients need based on interpretation of patient data clinical biochemical, biophysical etc.
- (3) Hospital food service.
- (4) Routine hospital diets (a) Regular (b) Light (c) Soft, (d) Fluid
- (5) Modes of feeding
- (6) External - tube feeding
- (7) Parenteral (i) Peripheral vein feeding (ii) Total parenteral nutrition
- (8) Psychological factor in feeding the sick person
- (9) Effect of food, nutrients and nutritional status on drug dosage and efficiency.

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Unit-III

- A) **Overweight and obesity**
 - (1) Definition
 - (a) Classification
 - (b) Assessment
 - (c) Causes, Physiology of obesity, mathematics of weight reduction.
 - (2) Treatment of obesity
 - (a) Dietary management and calorie restriction plan
 - (b) Exercise
 - (c) Other approaches of weight reduction
- B) **Underweight**
 - (1) Definition
 - (a) Criterion
 - (b) Etiology
 - (2) Treatment
 - (a) High calorie diet
- C) **Injection and fever**
 - (1) Metabolism, effect on body mechanism and classification
 - (2) Etiology, Pathology symptoms and treatment of a
 - (a) Acute fever - viral fever
 - (b) Chronic fever - typhoid and TB

UNIT-IV

- A) **Diseases of gastro intestinal tract causes, Pathogenesis, Symptoms and Dietary management of**
 - (1) Diseases of esophagus
 - (a) Achalasia
 - (b) Oesophagitis
 - (2) Disease of stomach
 - (a) Indigestion
 - (b) Gastritis

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- (c) Peptic ulcer
- (d) Esophagitis
- (3) Disease of intestine
 - (a) Constipation
 - (b) Diarrhea
 - (c) Hemorrhoids
 - (d) Steatorrhoea
- (4) Inflammatory diseases of bowel
 - (a) Diverticular disease
 - (b) Ulcerative Colitis
- (5) Malabsorption syndrome
 - (a) Sprue
 - (b) G-IT enzyme deficiency

UNIT-V

1) Diseases of liver exocrine pancreas and biliary system: Physiology, Etiology, Pathogenesis, Symptoms and Management

- (1)
 - (a) Physiology of liver
 - (b) Diet and liver disease
- (2) Liver diseases
 - (a) Cirrhosis
 - (b) Viral hepatitis
 - (c) Hepatic coma
 - (d) Wilson's disease
- (3) Disorder related to gall bladder
 - (a) Cholecystitis
 - (b) Gall stones
- (4) Disorders related to pancreas
 - (a) Pancreatitis

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Practical:

1. Calculating BMR using the Kymograph
 2. Calculate the energy balance of an Individual
 3. Calculate the energy expenditure using the Satyanarayan Method.
-
4. Calculation of percent energy supplied by carbohydrate in the diet.
 5. To find out the high fibre products available in market and critically evaluate the content.
 6. Evaluation of protein quality of food preparations
 - (a) To calculate the chemical score of food item using the SAAP, PAAP, reference protein.
 - (b) Calculation of NDP cal% of dishes.
 7. To estimate the calcium content of feces and Urine and to assess the Calcium balance of an individual.
 8. To estimate the total nitrogen intake based on the protein intake and calculate the N₂ balance of and individual.
 9. Dietary calculation using food exchange.
 10. Planning, calculation and preparation of diets mentioned in theory.
 11. Nutritional supplement. nutritional support substrats.

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 Govt. K.R.G. P.G. Autonomous College Gwalior M.P.

M.Sc. (Home Science)
 Food and Nutrition
 SEMESTER-III
 PAPER-III
 Food science & Current Trends
 2018-19

M.M. 100

Objectives

This course is designed to:

- Provide an understanding of composition of various food stuffs.
- Familiarize students with changes occurring in various foodstuffs as a result of processing and cooking.
- Enable students to use the theoretical knowledge in various application and food preparations.
- Create awareness regarding current trends, issues and researches in various aspects of food and nutrition.

UNIT-I

- (a) **Introduction of Food Science:** Development of Food Science as a discipline.
 (b) **Water and Food Dispersions:** Physical properties of water and ice chemical nature, structure of the water molecule.
- Absorption phenomena, type of water
 - Free and bound water

UNIT-II

- Physico chemical properties of food.
- Colloidal salts, stabilization of colloidal systems.
- Gels structure, formation and stabilization
- Emulsions; formation, stability surfactants and emulsifier.

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UNIT-III

- Starch: Structure, gelatinization, methods of following gelatinization changes. Characteristics of some food starches. Effect of ingredient and conditions on gelatinization. Modified food starches.
- Non-starch Polysaccharides: Cellulose, Hemicelluloses, Pectin's gums, animal polysaccharide.
- Sugar and Sweeteners: Sugars, syrups alcohols, potent sweeteners, sugar products. Alternatives sweeteners. Browning.
- Reactions of sugar: Caramelization, Hydrolysis, Crystallization, Indian Confectionery.

UNIT-IV

Cereals and Cereals Products:

Cereal grains: Structure and Composition
 Cereal products
 Flours and flour quality
 Extruded foods breakfast cereals wheat germ, bulgur, puffed and flaked cereals.

UNIT-V

- (a) **Milk and Milk Product:** Composition, Physical and functional properties. Denaturation, effects of processing and storage and Dairy Products: Cultured milk, yogurt, butter, whey cheese concentrated and dried products Frozen desserts, dairy product substitute.
- (b) **Pulses and Legumes:** Classification, composition, denaturation, non-enzymatic browning and other.

Practicals:

1. Effect of solutes of boiling point and freezing point of water.
2. **Sugar and Jaggery Cookery:** Cararelization, crystallization, factors affecting crystal formation. Preparation of standardized chikky, laddos gulabjammin, jalebi, Shakarparas, chocolates.
3. **Starches, vegetable Gums and cereals:** Gelatinization properties of starches, factors affecting Gelatinization formation. To see the effect of soaking time of the quality of rice. To study the formation of gluten.
4. **Jams and Jellies:** Pectin content of fruits, role of acid, pectin and sugar in jam and jelly formation.
5. **Fat and Oils:** Flash point, melting point and smoking point. Role of fats and oils in cookery, plasticity of fats. Permanent and semi permanent emulsions. To study the effects of various factors affecting the fat absorption. Use of various types of fats (unsaturated & saturated) in cookery.

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**M.Sc. (Home Science)
Food and Nutrition
SEMESTER-III
PAPER-IV**

**Scientific Writing & Communication Technology
20 -18 - 19**

M.M. 100

Objectives

- To be able to appreciate and understand importance of writing scientifically.
- To develop competence in writing and abstracting skills.
- To write either a draft research proposal or a chapter of dissertation.

CONTENTS

UNIT-I

- 1. Scientific writing as a means of communication**
 - Different forms of scientific writing
 - Articles in Journals, Research
 - Notes Monographs
 - Bibliographies
- 2. How to formulate outlines**
 - The reasons for preparing outlines
 - As a guide for plan of writing
 - As skeleton for the manuscript
 - Kinds of outline
 - Topic outlines
 - Conceptual outline
 - Sentence outline, combination of topic and sentence outlines.

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UNIT-II

3. Drafting titles, sub title, tables, illustrations

- Tables as systematic means of presenting data in rows and lucid way of indicating relationships and results.
- Formatting tables, title, body tab, tab column, column head, spanner head box, head
- Appendices: Use and guidelines

UNIT-III

4. The Writing process

Getting started

Use of outline as a starting device

Drafting

Reflecting Re-recording

Checking organization

Checking headings

Checking content

Checking clarity

Checking grammar

Brevity and precision in writing drafting and re-drafting.

UNIT-IV

5. Parts of dissertation/research report/article

- Introduction
- Review of Literature
- Method
- Results and discussion
- Ask questions related to content, continuity, clarity, validity, internal consistency and objectively during writing each of the above parts.

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PRACTICAL:

Total Marks: 50

OBJECTIVES:

- To develop underlining regarding the vital aspects of communication and behaviors Audi and Visual Media and their use.
- The develop understanding regarding the new communication technologies and their use.
- To develop skills in developing using different communication technology for various presentations.

CONTENTS:

1. Concept for the communication, scope for communication, communication process. Approaches of communication.
2. Different media their characteristics and use.
3. Use of Video projector slide/Filmstrip projector computers.
4. Introduction to new communication technology.
 - Satellite distribution Broadcast networking.
 - Developing close circuit television package on (ccTV) topics.
 - Incorporating the use of video films in presentations i.e. the selected clippings.
 - Slide: making use of slides with audio commentaries for presentations.
 - Development and use of tranpirancies.
 - Digital method of Communication technologies.
 - Computer graphic design.
5. Preparation of graphics for research reports/seminars/other presentations.
6. Designing - Leaflets/pamphlets/Booldets/Vover pages/Posters.
7. Presentations using power point.

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**M.Sc. (Home Science)
Food and Nutrition
SEMESTER-IV
PAPER-I
Health and Fitness
20 -18-19**

M.M. 100

Objectives

- Understand the components health and fitness and the role of nutrition in these. Make nutritional. Dietary and physical recommendations to achieve fitness and well-being.
- Develop ability to evaluate fitness and will.

UNIT-I

(A) Body Composition

(1) Methods

- (a) Chemical analysis
- (b) Nutritional anthropometry
- (c) Skin fold Thickness
- (d) Body density
- (e) Dilution Technique
- (f) ⁴⁰K Analysis
- (g) Other methods: Concept

(2) Composition changes concept

- (a) Human foetal development
- (b) Material weight gain - Distribution composition
- (c) Compositional changes between birth and maturity
- (d) Compositional changes with weight changes: Physical activity, Obesity

(B) Holistic approach to the management of fitness and health: Nutrition, Exercise, Physical fitness and health inter-relationship

- (a) Energy input and output
- (b) Diet and Exercise

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UNIT-II

- (A) Effect of specific nutrients on work performance and physical fitness. Shifts in carbohydrate and fat metabolism, mobilization of fat stores during nutrition in sports: Sports specific requirements. Diet manipulation. Pre-game and Post game meals.

UNIT-III

- (A) **Water:** Regulation of intra and extra cellular volume osmolality, water balance and its regulation. Water electrolyte losses and their replenishment during exercise and sports events, effects of dehydration, importance of sports drinks.
- (B) Diet for persons with high energy requirements stress and starvation.

UNIT-IV

- (A) Defining nutrition goals/guidelines appropriate to health, fitness and prevention and management of chronic degenerative disease diabetes mellitus CV disorders, bone, health and cancer.
- (B) Nutrition and exercise regimes for management of obesity. Critical review of various dietary regime for weight and fat reduction. Prevention of weight cycling.

UNIT-V

- (A) Nutrition and exercise regimes for pre and post natal fitness.
- (B) Alternative systems for health and fitness like ayurveda yoga, meditation, vegetarianism and traditional diet.
- (C) Nutrition management in special conditions: Space travel, high altitudes, low temperature submarines

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M.Sc. (Home Science)
 Food and Nutrition
 SEMESTER-IV
 PAPER-II
 Clinical & Therapeutic Nutrition
 20 -18-19

M.M. 100

Objectives

1. Understand the etiology, physiologic and metabolic anomalies of acute and chronic diseases and patient's need.
2. Know the effect of various diseases on nutritional requirement and nutritional status.
3. Be able to recommend and provide appropriate nutritional care for preventions and treatment of various diseases.
4. Orient the students with all the important state of art methodology applied in Nutritional assessment and surveillance of human groups.
5. Develop specific skills to apply the most widely used methods.

UNIT-I

A) Nutritional care in Cardio-vascular disorders.

1. Hypertension-

- (a) Definition
- (b) Criterion
- (c) Types
- (d) Causes
- (e) Nutritional Management
- (f) Drugs

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2. **Hyperlipidemia**
 - (a) Lipo-proteins and their metabolism
 - (b) Classification of hyperlipidemia
 - (c) Clinical and Nutritional aspects of hyperlipidemia
 - (d) Dietary Care
3. **Coronary Heart Disease (CHD)**
 - (a) Atherosclerosis-
 - (i) Etiology
 - (ii) Pathogenesis
 - (b) Risk factors associated with CHD
 - (c) Management of CHD
 - (i) Dietary Management
 - (ii) Exercise
 - (d) Prevention of CHD

UNIT-II

- A. **Cerebrovascular disorder and nutritional management**
 - (a) Pathogenesis
 - (b) Etiology
 - (c) Nutritional
- B. **Diet in Disease of endocrine pancreas**
 - (a) Etiology
 - (b) Classification
 - (c) Symptoms and diagnosis
 - (d) Management clinical vs. chemical control
 - (e) Insulin Therapy
 - (f) Oral hypoglycemic drugs
 - (g) Glucose monitoring at home
 - (h) Dietary care with and without insulin
 - (i) Specific Diabetic food
 - (j) Sweetness and sugar substitutes
 - (k) Diabetic coma
 - (l) Insulin reaction
 - (m) Patient education

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UNIT-III

- A. Nutritional care in hypoglycemia**
- (1) Hypoglycemia
 - (a) Symptoms
 - (b) Types
 - (i) Reactive Hypoglycemia
 - (ii) Idiopathic Hypoglycemia
 - (c) Dietary treatment
- B. Nutritional care for patient with disease of kidney**
- (1) Review of physiology and function of normal kidney
 - (2) Nephritis
 - (a) Classification
 - (b) Etiology
 - (c) Characteristics
 - (d) Nutritional care and management
- C. Nephritic syndrome**
- (a) Etiology
 - (b) Characteristics
 - (c) Nutritional care and management

UNIT-IV

Nutritional care for patients having surgery and burns

- (A) Surgery**
- (1) Pre operation nutritional care
 - (2) Postoperative nutritional care
 - (a) Gastric surgery.
 - (b) Gall bladder surgery
 - (c) Colon surgery
 - (d) Tonsil surgery
 - (e) Oesphagus surgery

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(B) Burns

- (1) Dietary factors and cancer causation
- (2) Cancer treatment: Radio therapy, surgery and chemotherapy
- (3) Alternative or complementary diets
- (4) Prevention

(C) Cancer

- (1) Dietary factors and cancer causation
- (2) Cancer treatment: Radio therapy, surgery and chemotherapy
- (3) Alternative or complementary diets
- (4) Prevention

Unit-V

Nutritional care HIV immune suppressed patients and management of infancy and childhood nutritional problems.

1. HIV disease and AIDS

- (a) Nutritional problems associated with HIV diseases
- (b) Role of diet and nutritional support

2. Diets for immune suppressed patients

3. Nutritional management of

- (a) Kwashiorkor
- (b) Marasmus
- (c) Vitamin A deficiency

4. Latest researches and concepts in management of various life style problems

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Practical:

M.M. 100

1. Planning calculation and preparation of diets mentioned in theory.
2. Interpretation of patient data and diagnosis tests and drawing up of patient diet prescription using a case study approach.
3. Follow up acceptability of diet prescription, compliance, discharge diet plan.
4. Preparation of diet counseling aids for common disorders.
5. Spotting.

References:

1. Manual of Dietetics Practice - Brony Thomas.
2. Nutrition in Health and Disease - Anderson
3. Normal in Therapeutic Nutrition C.H. Robinson
4. Basic Nutrition and Diet Therapy - William 10/c
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7. Nutrition and Diet Therapy - Stanfield
8. Modern Nutrition in Health and Disease - Robert S. Goodhart.
9. Nutritional Principles and Clinical Practices - Sara M. Hunt and James
10. Nutrition in Critical Care - Zaroga
11. Fundamentals of Clinical Nutrition 93 - Weinster
12. Dietetics - Shrilaxami
13. Nutrition and Dietetics - Shubhangini Joshi
14. Human Nutrition and Dietetics - Davidson Passmore
15. Clinical Dietetics and Nutritional F.P. Anita
16. Textbook of Nutritional and Dietetics - Kumud Khanna et al
17. Mohan L.K. and Excott Stump (2000) Krause's Food Nutrition Diet Therapy 10th Edition W.B. Saunders Ltd.
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M.Sc. (Home Science)
Food and Nutrition
SEMESTER-IV
PAPER-III
Food Science & Current Trends
20 -18 -19

M.M. 100

Objectives

- Provide an understanding of composition of various foods stuffs.
- Familiarize students with changes occurring in various foodstuffs as a result of processing and cooking.
- Enable students to use the theoretical knowledge in various application and food preparations.
- Create awareness regarding current trends, issues and researches in various aspects of food and nutrition.

UNIT-I

- (A) **Enzymes:** Nature of enzymes, stability and action. Proteolytic enzymes, oxidases, lipases, enzymes decomposing carbohydrates and application immobilized enzymes.
- (B) **Meat and Poultry:** Muscle composition, characteristics and structure. Post mortem changes. Processing, Preservation and their effects. Heat induced changes in meat. Variables in meat preparation. Tenderizers. Meat products.

Unit-II

- (A) **Eggs:** Structure and composition. Changes during storage. Functional properties of eggs use in cookery. Egg Processing. Low Cholesterol egg substitutes.
- (B) **Fish and Sea Food:** Types and composition, Storage and changes during storage changes during processing. By products and newer products.

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**Semester wise syllabus for Post Graduates
As recommended by board of studies
Govt. K.R.G. P.G. Autonomous College Gwalior M.P.**

UNIT-III

) **Fats, Oils and Related Products:** Nuts and Oils seeds. Sources composition, effects of composition on fat properties. Functional properties of fat and uses in food preparations. Fat substitutes. Fat deterioration and antioxidants.

) **Fruits and Vegetables:** Plant anatomy, structure and composition, Enzymes in fruits and vegetables. Flavour constituents. Plant phenolics. Pigments Post harvest changes. Texture for fruits and vegetables. Effects of storage processing and preservation.

UNIT-IV

) **Leavened Products:** Leavening agents, Biologically leavened and chemically leavened products. Batters and dough.

i) **Salt and substitutes**

) **Spices and Condiments:** Composition, Flavouring extracts natural anti-synthetic.

UNIT-V

A) **Biotechnology in Food:**

- Algae as food spirulina
- Organic food
- Nutraceuticals
- Low cost nutrients
- Supplement
- Space foods
- Food irradiation
- Packaging of foods
- Food safety and Standards, Quality standards
- Entrepreneurship Management

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Practical:

M.M. 50

Food Science

1. **Milks and Milk Products:** Scalding denaturation. Effect of acid salt, alkali, sugar, heat, enzymes, Rasgullas, Khoa, curd, paneer, Cheese (Ripened and unripened). Effect of fermentation on milk proteins.
2. **Egg:** Emulsion, thickening. Binding, gelling, Method of egg cookery and effects of heat. Egg white foams and factors and factors affecting foams. Determination of the egg coagulation at different temperature. Effect of cooking time on colour, texture and acceptability of whole egg. Effect of cooking method on coagulation property of eggs. Effect of different factors on the gelation temperature and consistency of egg custard. Effect of temperature on the stability of natural emulsion. Effect of adding sugar and acid on the stability of milk emulsion. Preparation of mayonnaise using different variations and determining the best method of preparing a stable emulsion. Effect of salt, acid, sugar and fat on the stability of egg white foam. Demonstrate the effect of foaming on the volume and texture of omelettes. Effect of foaming on the quality of hot and cold souffles. Effect of yolk contamination on the volume and texture of ankle cake of foaming on the quality of hot and cold souffles. Effect of yolk contamination on the volume and texture of angel cake.
3. **Pulses:** Effects of various cooking and processing methods on various characteristics. Functional properties of pulses and their products. Time, temperature and water required for whole pulses and legumes. Time temperature and water required for sprouting whole pulses and legumes. Effect of cooking on whole and split pulses and legumes.
4. **Meat and Poultry:** Methods affecting tenderness of Meat, effect of various methods of cooking and ingredients on colour, volume texture flavour, aroma and water holding capacity.
5. **Gelation:** Gelation, get strength and factors effecting gelation. Ability foam.
6. **Leavening agents:** Use of Leavening agents cookery.

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Semester wise syllabus for Post Graduates
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Govt. K.R.G. P.G. Autonomous College Gwalior M.P.
M.Sc. (Home Science)
F.N/ R.M./ H.D.
SEMESTER-IV
PAPER-IV (OPTIONAL)
Mass Communication
20 -18 -19

M.M. 100

Objectives

- To understand the importance of communication.
- To develop skill and communication ability
- Importance of audio-visual aids in communication.

UNIT-I

- Concept of communication
- Elements and process of communication
- Functions of communication
- Non verbal communication sign, Gestures, Body movement
- Verbal communication language and written communication

UNIT-II

- Types of communication - Intra personal, Inter personal, Group communication and mass communication.
- Feedback in communication
- Characteristics and method of feedback
- Elements of effective communication
- Barriers to communication

UNIT-III

- Print Media - Origin, development characteristics of News paper
- news agencies - United News or India (UNI)
- Press Trust of India (PTI) Reuter, tass and etc.
- Magazine - Format, Types and organization
- Concept of News, values, sources of News
- Structure of news Report
- Features article, Editorial.

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UNIT-IV

- Radio-Origin, development and characteristics of Radio.
- Radio as a mass medium
- Radio news, radio features
- Various types of Interview.
- Folk Media

UNIT-V

- Television-origin, development and characteristics of television
- TV. News
- Contribution of T.V. in Social Development
- Film Origin Development of India film
- Socio-cultural effects of film as mass medium. Censorship
- Using film for extension

PRACTICAL:

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1. Operation of various projectors
 - (a) OHP
 - (b) Slide
 - (c) Tape recorder
 - (d) VCR
 - (e) CD Player
 - (f) Computer
2. Preparation of
 - (a) Visual non projected materials
 - (b) Booklets
 - (c) Pamphlets.

 - (d) Invitations
 - (e) Posters
 - (f) Manuals
 - (g) Cover pages and Posters

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News script for T.V. Ratio and News paper
 Visit mass media centers and slum area
 Seminar
 Term Paper


References:

Denis Macwell	Mass Communication Theory & Introduction
C.S. Raynd	Communication
K.M. Shrivastava	Radio and T.V. Journalism
M.V. Kanath	Professional Journalism
डॉ. ओम प्रकाश सिंह	संचार माध्यमों का प्रभाव
डॉ. श्रीकांत सिंह	जनसंचार
डॉ. वेदप्रताप वैदिक	पत्रकारिता के विविध आयाम
डॉ. हीरमोहन	रेडियो एवं दूरदर्शन पत्रकारिता
डॉ. अर्जुन तिवारी	आधुनिक पत्रकारिता

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