

M.Sc Dietetics & Food Service Management (M.Sc DFSM)

| I Year | | | Instructional System | | | | | | | | |
|---------------|----------|------------------------------------|----------------------|--------|---------|---------|---------|-------------|--------------|-------------|------------|
| Course Code | SLM Code | Name of Subject | PC P | A W | VG D | PD P | PE C | P P W | II I L | Credit s | Marks |
| M.Sc. DFSM -1 | MFN-001 | Applied Physiology | √ | √ | √ | | | | | 4 | 100 |
| M.Sc. DFSM -2 | MFN-002 | Nutritional Biochemistry | √ | √ | √ | | √ | | | 4 | 100 |
| M.Sc. DFSM -3 | MFN-003 | Food Microbiology & Safety | √ | √ | √ | | √ | | | 4 | 100 |
| M.Sc. DFSM -4 | MFN-004 | Advance Nutrition | √ | √ | √ | | √ | | | 6 | 100 |
| M.Sc. DFSM -5 | MFN-005 | Clinical and Therapeutic Nutrition | √ | √ | √ | | √ | | | 6 | 100 |
| Total | | | | | | | | | | 24 | 500 |

| II Year | | | Instructional System | | | | | | | | |
|----------------|----------|--|----------------------|--------|---------|---------|---------|-------------|--------------|-------------|------------|
| Course Code | SLM Code | Name of Subject | PC P | A W | VG D | PD P | PE C | P P W | II I L | Credit s | Marks |
| M.Sc. DFSM -6 | MFN-006 | Public Nutrition | √ | √ | √ | | √ | | | 6 | 100 |
| M.Sc. DFSM -7 | MFN-007 | Entrepreneurship & Food Service Management | √ | √ | √ | | √ | | | 6 | 100 |
| M.Sc. DFSM -8 | MFN-008 | Principle of Food Science | √ | √ | √ | | √ | | | 6 | 100 |
| M.Sc. DFSM -9 | MFN-009 | Research Methods and Biostatics | √ | √ | √ | | √ | | | 6 | 100 |
| M.Sc. DFSM -10 | MFN-010 | Understanding Computer Application | √ | √ | √ | | √ | | | 6 | 100 |
| M.Sc(DFSM)-11 | - | Dissertation | | | | | | √ | | 6 | 200 |
| Total | | | | | | | | | | 36 | 700 |

Paper-I
Applied Physiology (MFN-001)

UNIT 1 INTRODUCTION TO PHYSIOLOGY

- 1.1 Physiology as a Discipline
- 1.2 How Cells Join Together
- 1.3 Physiology of Growth and Development
- 1.4 Physiology of Ageing
- 1.5 Nutrition and Physiology

UNIT 2 CELL AND BLOOD

- 2.1 Cell: The Basic Unit of Life
- 2.2 Structure of the Cell
- 2.3 Cell Cycle
- 2.4 Tissue and their Functions
- 2.5 Blood
- 2.6 Blood Composition
- 2.7 Erythropoiesis
- 2.8 Blood Groups
- 2.9 Anaemia
- 2.10 Haemostasis

UNIT 3 THE IMMUNE SYSTEM

- 3.1 The Immune System
- 3.2 Non-Specific Defence Mechanism
- 3.3 Specific Defence Mechanism
- 3.4 Innate Immunity
- 3.5 Specific Acquired Immunity
- 3.6 The Leukocytes: Development and Regulation
- 3.7 In-vitro Detection of Antigen-Antibody Interaction

UNIT 4 CARDIOVASCULAR SYSTEM

- 4.1 Design of Cardiovascular System
- 4.2 What is the Heart Made up of ?
- 4.3 The Uniqueness of Our Heart
- 4.4 Cardiac Output
- 4.5 The Cardiac Cycle
- 4.6 Blood Pressure
- 4.7 Pathophysiology of Hypertension
- 4.8 Myocardial Ischemia and Infarction
- 4.9 Aerobics Exercise and Diet: How to Keep Your Heart Healthy
- 4.10 ECG-What It is and Why do We Need It?

UNIT 5 RESPIRATION

- 5.1 Organs of the Respiratory System
- 5.2 The Mechanics of Respiration
- 5.3 Pulmonary Volumes
- 5.4 Interchange of Gases Within the Lungs
- 5.5 Regulation of Respiration
- 5.6 Internal Respiration
- 5.7 Respiratory Adjustments
- 5.8 Artificial Respiration

UNIT 6 PHYSIOLOGY OF GASTROINTESTINAL SYSTEM

- 6.1 Description of the Gastrointestinal Tract
- 6.2 Mouth
- 6.3 Salivary Glands
- 6.4 The Pharynx
- 6.5 The Oesophagus
- 6.6 The Stomach
- 6.7 The Pancreas
- 6.8 The Liver and Biliary System
- 6.9 The Small Intestine
- 6.10 The Large Intestine
- 6.11 Movements of the Gastrointestinal Tract
- 6.12 Gastrointestinal Hormones
- 6.13 Absorption and Utilization of Carbohydrates, Proteins and Fats
- 6.14 Some Common Disorders of the Digestive System

UNIT 7 PHYSIOLOGY OF RENAL SYSTEM

- 7.1 Organs of the Urinary System
- 7.2 Kidney: Structure and Functions
- 7.3 Ureters
- 7.4 The Urinary Bladder
- 7.5 The Urethra
- 7.6 Constituents and Examination of Urine
- 7.7 Renal Function Tests
- 7.8 Pathophysiology of Kidney
- 7.9 Dialysis
- 7.10 Kidney Transplant

UNIT 8 MAINTENANCE OF BODY HOMEOSTASIS

- 8.1 Homeostasis – An Introduction
- 8.2 Body Fluids
- 8.3 Measurement of Body Fluid Volumes
- 8.4 Transport Across Cell Membranes
- 8.5 Solute-Solvent Interaction

UNIT 9 NERVOUS SYSTEM

- 9.1 How does Our Body Know ‘What to Do’?
- 9.2 Nerve Cell
- 9.3 Structural Organization of Nervous System
- 9.4 The Central Nervous System
- 9.5 The Peripheral Nervous System (PNS)
- 9.6 Electroencephalogram (EEG)

UNIT 10 SPECIAL SENSES

- 10.1 Vision
- 10.2 Hearing
- 10.3 A Sense of Taste – Gustation
- 10.4 A Sense of Smell – Olfaction

UNIT 11 PHYSIOLOGY OF THE ENDOCRINE GLANDS

- 11.1 Hormones
- 11.2 Endocrine Glands
- 11.3 The Pituitary Gland
- 11.4 The Thyroid Gland
- 11.5 The Parathyroid Glands
- 11.6 The Pancreas
- 11.7 The Adrenal Glands
- 11.8 The Pineal Gland
- 11.9 The Thymus Gland
- 11.10 Kidney as an Endocrine Gland

UNIT 12 THE REPRODUCTIVE SYSTEM

- 12.1 The Reproductive System
- 12.2 The Female Reproductive System
- 12.3 The Male Reproductive System
- 12.4 Growth and Development During Pregnancy
- 12.5 Physiology of Lactation
- 12.6 Role of Hormones in Reproduction
- 12.7 Disorders of the Reproductive System
- 12.8 Contraception
- 12.9 Common Tests During Pregnancy

Paper-II
Nutritional Biochemistry (MFN-002)

UNIT 1 CARBOHYDRATES

- 1.1 Introduction to Nutritional Biochemistry
- 1.2 Chemistry of Carbohydrates
- 1.3 Monosaccharides
- 1.4 Oligosaccharides
- 1.5 Polysaccharides

UNIT 2 LIPIDS AND PROTEINS

- 2.1 Chemistry of Lipids – Introduction
- 2.2 Lipids – Structure and Classification
- 2.3 Chemical Properties of Fatty Acids and Neutral Fats
- 2.4 Chemistry of Proteins and Nucleic acids
- 2.5 Amino Acids – Structure, Classification and Properties
- 2.6 Proteins – Structure, Classification and Properties
- 2.7 Structure and Classification of Nucleic Acids

UNIT 3 VITAMINS

- 3.1 Vitamins – Introduction and Classification
- 3.2 Structure and Properties of Water Soluble Vitamins
- 3.3 Structure and Properties of Fat Soluble Vitamins

UNIT 4 ENZYMES AND COENZYMES

- 4.1 Introduction to Enzymes and Coenzymes
- 4.2 Nomenclature and Classification of Enzymes
- 4.3 Specificity of Enzymes
- 4.4 Mechanism of Enzyme Action
- 4.5 Enzyme Kinetics
- 4.6 Factors Affecting Enzyme Activity
- 4.7 Enzyme Inhibition
- 4.8 Role of Enzymes and Coenzymes in Metabolism
- 4.9 Isozymes
- 4.10 Enzymes in Clinical Diagnosis

UNIT 5 DIGESTION, ABSORPTION AND TRANSPORT OF CARBOHYDRATES, PROTEINS AND LIPIDS

- 5.1 Digestion, Absorption and Transport – Basic Concept
- 5.2 Digestion
- 5.3 Digestion of Food Materials
- 5.4 Absorption and Transport

UNIT 6 CARBOHYDRATE METABOLISM

- 6.1 Carbohydrate Metabolism: An Overview
- 6.2 Glycolysis
- 6.3 Oxidation of Phruvate to Acetyl CoA
- 6.4 Citric Acid Cycle
- 6.5 Gluconeogenesis
- 6.6 Metabolism of Glycogen
- 6.7 Hexose Monophosphate Pathway
- 6.8 Entry of other Sugars into Glycolytic Pathway
- 6.9 Regulation of Blood Glucose Level
- 6.10 Electron Transport Chain

UNIT 7 LIPID METABOLISM

- 7.1 Lipid Metabolism – I
- 7.2 Lipid Metabolism – II
- 7.3 Hyperlipoproteinemias
- 7.4 Ketosis

UNIT 8 AMINO ACID AND NUCLEOTIDE METABOLISM

- 8.1 Amino Acid Metabolism
- 8.2 Nucleotide Metabolism

UNIT 9 ANTIOXIDANTS

- 9.1 Antioxidants and Free Radicals
- 9.2 Role of Oxygen Free Radicals
- 9.3 Production of Oxygen Free Radicals
- 9.4 Physiological Mechanisms to Limit Free Radical Damage
- 9.5 Free Radical in Human Pathology and Disease
- 9.6 Natural and Diet-Derived Antioxidants

UNIT 10 VITAMINS AND MINERALS

- 10.1 Vitamins
- 10.2 Fat-Soluble Vitamins

- 10.3 Water-Soluble Vitamins
- 10.4 Minerals – An Introduction

UNIT 11 HORMONES

- 11.1 The Endocrine System
- 11.2 Regulation to the Endocrine System
- 11.3 Mechanism of Hormone Action
- 11.4 Biochemical Role of Hormones

UNIT 12 INBORN ERRORS OF METABOLISM

- 12.1 Inborn Errors of Metabolism – General Concepts
- 12.2 Disorders of Protein Metabolism
- 12.3 Disorders of Carbohydrate Metabolism
- 12.4 Disorders of Lipid Metabolism
- 12.5 Haemoglobinopathies

Paper-III
FOOD MICROBIOLOGY AND SAFETY (MFN-003)

UNIT 1 MICROBIOLOGY OF FOODS

- 1.1 Food Microbiology – Basic concept
- 1.2 History of Food Microbiology
- 1.3 Role of Microbiology in Biotechnology
- 1.4 Role Microorganisms in Fermented Foods

UNIT 2 FOOD SAFETY – BASIC CONCEPTS

- 2.1 Food Safety and Importance of Safe Food
- 2.2 Factors Affecting Food Safety
- 2.3 Microorganisms in Foods
- 2.4 Recent concerns of Food Safety

**UNIT 3 OCCURRENCE AND GROWTH OF
MICROORGANISMS IN FOOD**

- 3.1 Microbiology of Air, Water and Soil
- 3.2 Sources of Foods Contamination
- 3.3 Factors Affecting the Growth of Microorganisms
- 3.4 Control and Destruction of Microorganisms

UNIT 4 FOOD SPOILAGE

- 4.1 Factors Responsible for food Spoilage
- 4.2 Chemical Changes due to Spoilage
- 4.3 Spoilage of Different Foods

UNIT 5 FOOD HAZARDS OF MICROBIAL ORIGIN

- 5.1 Food Borne Diseases
- 5.2 Food Borne Intoxications
- 5.3 Food Borne Infections
- 5.4 Food Borne Toxic Infections
- 5.5 Mycotoxins
- 5.6 Food Borne Diseases Due to Naturally Occurring Toxicants
- 5.7 Reporting and Investigations of Food Borne Diseases

UNIT 6 FOOD CONTAMINANTS

- 6.1 Food Contamination
- 6.2 Naturally Occurring Toxicants
- 6.3 Environmental Contaminants
- 6.4 Miscellaneous Contaminants

UNIT 7 FOOD ADDITIVES

- 7.1 What is a Food Additive?
- 7.2 Classification of Food Additives
- 7.3 Functional Role of Different Additives
- 7.4 Safety Issues

UNIT 8 FOOD ADULTERATION

- 8.1 Food Adulteration
- 8.2 Foods Commonly Adulterated
- 8.3 Common Adulterants
- 8.4 Harmful Effects of Adulterants
- 8.5 Methods for Detection of Some Adulterants

UNIT 9 FOOD SAFETY IN FOOD SERVICE ESTABLISHMENTS AND OTHER FOOD AREAS

- 9.1 Food Safety and Food Service Establishments
- 9.2 Food Safety Measures in a Food Service Establishment
- 9.3 Street Foods – Food Safety Measures
- 9.4 Temporary Food Service
- 9.5 Food Safety on Wheels, Wings and Waves

UNIT 10 HYGIENE AND SANITATION IN FOOD SERVICE ESTABLISHMENTS

- 10.1 Sanitation in Food Service Establishments
- 10.2 Hygiene Requirements for Licensing and Sale
- 10.3 Health Status of Food Handlers
- 10.4 Personal Hygiene
- 10.5 Facilities to Employees

UNIT 11 FOOD PACKAGING

- 11.1 Packaging: Concepts, Significance and Functions
- 11.2 Classification of Packaging Materials
- 11.3 Packaging Methods

- 11.4 Moisture Sorption Properties of Foods and Selection of Packaging Materials
- 11.5 Interactions between Packaging and Food – Toxicity Hazards
- 11.6 Biodegradable Material and Environmental Issues
- 11.7 Labeling Requirements and Bar Coding
- 11.8 Packaging Laws and Regulations

UNIT 12 RISK ANALYSIS

- 12.1 Risk Analysis: The New Paradigm in Food Safety Assurance
- 12.2 Risk Assessment
- 12.3 Risk Management
- 12.4 Risk Communication

UNIT 13 HACCP – A FOOD SAFETY ASSURANCE SYSTEM

- 13.1 HACCP – An Effective Food Safety Assurance System
- 13.2 Need for HACCP
- 13.3 Benefits of HACCP
- 13.4 Principles of HACCP
- 13.5 Guidelines for Application of HACCP Principles
- 13.6 The HACCP Status in India
- 13.7 HACCP Case Studies

UNIT 14 FOOD REGULATIONS: STANDARDS AND QUALITY CONTROL

- 14.1 Food Standards and Regulations in India
- 14.2 The Prevention of Food Adulteration Act, 1954
- 14.3 Compulsory National Legislations
- 14.4 Voluntary Based Product Certification
- 14.5 Regulations Related to Genetically Modified Foods
- 14.6 International Organization and Agreements in the Area of Food Standardization and Quality Control

Paper-IV
Advance Nutrition (MFN-004)

UNIT 1 UNDERSTANDING NUTRITION

- 1.1 Nutrition Science: Basic Concepts
- 1.2 History of Nutrition
- 1.3 Nutritional Requirements
- 1.4 Methods for studying the Nutrient Requirements
- 1.5 National and International Recommendations on Nutrient Requirements
- 1.6 Goals of National and International Requirement Estimates and RDAs
- 1.7 Dietary

UNIT 2 HUMAN ENERGY REQUIREMENTS

- 2.1 Energy: Some Basic Concepts
- 2.2 Definition and Components of Energy Requirement
- 2.3 Factors Affecting Energy Expenditure and Requirement
- 2.4 Methods of Estimation of Energy Expenditure and Requirement
- 2.5 Energy Requirements and Dietary Energy Recommendations
- 2.6 Energy Imbalance: An Overview

UNIT 3 CARBOHYDRATES

- 3.1 Classification of Carbohydrates
- 3.2 Functions
- 3.3 Digestion and Absorption
- 3.4 Metabolic Utilization of Carbohydrates
- 3.5 Regulation of Blood Glucose Concentration
- 3.6 Dietary Fibre
- 3.7 Resistant Starch
- 3.8 Fructo Oligosaccharides (FOS)
- 3.9 Glycemic Index (GI)
- 3.10 Modification of Carbohydrate Intake for Specific Disorder

UNIT 4 PROTEINS

- 4.1 Proteins – An Overview
- 4.2 Methods of Determination of Proteins and Amino Acid Content in Foods
- 4.3 Improvement of Quality of Protein in the Diet
- 4.4 Methods of Estimating and Assessing Protein Requirements at Different Stages of Life Cycle
- 4.5 Nutritional Requirements and Recommended Allowances for Proteins and Amino Acids
- 4.6 Protein Deficiency

UNIT 5 LIPIDS

- 5.1 Fats: Some Basic Facts
- 5.2 Types of Fats and its metabolism
- 5.3 Functions of Fat and Oils
- 5.4 Nutritional Requirements of Fat and Oils
- 5.5 Excessive Fat Intake

UNIT 6 WATER

- 6.1 Water: An Essential but Overlooked Nutrient
- 6.2 Water Distribution and Compartments of Body Water
- 6.3 Water Balance
- 6.4 Requirements for Water
- 6.5 Disturbances in Fluid Balance

UNIT 7 FAT-SOLUBLE VITAMINS: VITAMIN A,D, E AND K

- 7.1 Fat-Soluble Vitamins – An Overview
- 7.2 Vitamin A
- 7.3 Vitamin D
- 7.4 Vitamin E
- 7.5 Vitamin K

UNIT 8 WATER-SOLUBLE VITAMINS: B COMPLEX VITAMINS & VITAMIN C

- 8.1 Water-Soluble Vitamins: An Overview
- 8.2 Thiamin (Vitamin B₁ or Aneurin)
- 8.3 Riboflavin
- 8.4 Niacin
- 8.5 Pyridoxine (Vitamin B₆)
- 8.6 Folate
- 8.7 Cyanocobalamin (Vitamin B₁₂)
- 8.8 Ascorbic acid (Vitamin C)
- 8.9 Interaction with other Nutrient

UNIT 9 MINERALS (MACRO MINERALS): CALCIUM, PHOSPHORUS, MAGNESIUM, SODIUM, POTASSIUM, CHLORIDE

- 9.1 General Nutritional Functions of Minerals
- 9.2 Absorption and Metabolism of Minerals
- 9.3 Calcium
- 9.4 Phosphorus
- 9.5 Magnesium
- 9.6 Sodium, Potassium and Chloride
- 9.7 Interactions of Macrominerals with other Nutrients

**UNIT 10 MINERALS (MICRO MINERALS): IRON, ZINC, COPPER,
SELENIUM, CHROMIUM, MANGANESE, IODINE AND
FLUORINE**

- 10.1 Micro Minerals – An Overview
- 10.2 Iron
- 10.3 Zinc
- 10.4 Copper
- 10.5 Selenium
- 10.6 Chromium
- 10.7 Manganese
- 10.8 Iodine
- 10.9 Fluorine

UNIT 11 FOOD COMPONENTS OTHER THAN ESSENTIAL NUTRIENTS

- 11.1 Functional Foods
- 11.2 Bioactive Substances from Protein Foods
- 11.3 Non-Glycerides in Edible Oils
- 11.4 Probiotics and Prebiotics
- 11.5 Polyphenols
- 11.6 Phytoestrogens
- 11.7 Other Dietary Factors with Antinutritional Effects
- 11.8 Health Benefits of other Dietary Factors with Antinutritional Effects

UNIT 12 MENU PLANNING

- 12.1 Menu Planning
- 12.2 Factors Affecting Food Choice
- 12.3 Exchange List vs. Food Composition Tables for Menu Planning
- 12.4 Planning for Adults
- 12.5 Nutrition of Women

UNIT 13 PREGNANT AND LACTATING MOTHERS

- 13.1 Pregnancy and Lactation – Critical Stages in the Lifecycle
- 13.2 Physiological Changes during Pregnancy
- 13.3 Nutritional Needs during Pregnancy
- 13.4 Maternal Nutrition and Foetal Outcome
- 13.5 Nutritional Assessment and Guidance in Prenatal Care
- 13.6 Common Concerns during Pregnancy
- 13.7 Lactation
- 13.8 Maternal Nutrition during Lactation

UNIT 14 INFANTS AND PRESCHOOL CHILDREN

- 14.1 Growth and Development
- 14.2 Nutrient Needs and Recommended Dietary Allowances
- 14.3 Diet and Feeding Patterns
- 14.4 National Programmes Targeting Infants and Preschoolers
- 14.5 Problems of Infants and Preschoolers Nutrition

UNIT 15 OLDER CHILDREN AND ADOLESCENTS

- 15.1 Older Children and Adolescents
- 15.2 Nutrient Needs and Recommended Dietary Intakes
- 15.3 Diet and Dietary Patterns
- 15.4 National Programmes Targeting Children and Adolescents
- 15.5 Problems of Older Children and Adolescent Nutrition

UNIT 16 THE ELDERLY

- 16.1 Definition of Old Age
- 16.2 Nutrition and Ageing
- 16.3 Physiological Changes Associated with Ageing
- 16.4 Changing Body Composition and Techniques for Measuring Body Composition
- 16.5 Nutritional Requirements and Dietary Modifications in the Diet of the Elderly
- 16.6 Guidelines for Planning Balanced Diets for Elderly

UNIT 17 SPORTS NUTRITION

- 17.1 What is Sports Nutrition?
- 17.2 Evolution and Growth of Sports Nutrition as a Discipline
- 17.3 Anthropometric and Physiological Measurement
- 17.4 Physical Fitness
- 17.5 Nutritional Demands of Sports and Dietary Recommendations
- 17.6 Ergogenic Aids for Training and Competition

UNIT 18 NUTRITIONAL REQUIREMENTS FOR SPECIAL CONDITIONS

- 18.1 Calamity and Emergency Management
- 18.2 Information Required for Management of Emergencies
- 18.3 Nutritional Requirements for Extreme Environments

UNIT 19 NUTRITIONAL REGULATION OF GENE EXPRESSION

- 19.1 Gene Expression – An Overview
- 19.2 Role of Specific Nutrients in Controlling Gene Expression

Paper-V
Clinical and Therapeutic Nutrition (MFN-005)

MFN-005 - Clinical and Therapeutic Nutrition

UNIT 1- INTRODUCTION TO MEDICAL NUTRITION THERAPY

- 1.1 Definitions and Role of Dietitian in Health Care
- 1.2 The Nutrition Care Process (NCP)
- 1.3 Importance of Coordinated Nutritional and Rehabilitation Services
- 1.4 Patient Care and Counseling

UNIT 2- ADAPTATION OF THERAPEUTIC DIETS

- 2.1 Therapeutic Diets
- 2.2 Types of Dietary Adaptations for Therapeutic Needs
- 2.3 Normal Nutrition: A base of Therapeutic Diet
- 2.4 Diet Prescription
- 2.5 Construction Therapeutic Diets
- 2.6 Routine Hospital Diets
- 2.7 Mode of Feeding

UNIT 3 - NUTRITIONAL MANAGEMENT OF INFECTIONS AND FEVERS

- 3.1 Defense Mechanism in the Body
- 3.2 Nutrition and Infection
- 3.3 Metabolic Changes during Infection
- 3.4 Classification and Etiology of Fever/Infection
- 3.5 Typhoid
- 3.6 Chronic Fever/Infection

UNIT 4 - MEDICAL NUTRITION THERAPY IN CRITICAL CARE

- 4.1 Nutritional Management of the Critically Ill
- 4.2 Special Feeding Methods in Nutritional Support

UNIT 5 - NUTRITION DURING STRESS

- 5.1 The Stress Response
- 5.2 Surgery
- 5.3 Burns
- 5.4 Trauma
- 5.5 Sepsis

UNIT 6 - NUTRITIONAL MANAGEMENT OF FOOD ALLERGIES AND FOOD INTOLERANCE

- 6.1 Adverse Food Reactions
- 6.2 Adverse Food Reactions-The Diagnosis Process
- 6.3 Treatment and Management of Adverse Food Reactions
- 6.4 Prevention of Adverse Food Reactions

UNIT 7 - NUTRIENT AND DRUG INTERACTION

- 7.1 Nutrient and Drug Interaction: Basic Concept
- 7.2 Effect of Nutrition on Drugs
- 7.3 Drug Effects on Nutritional Status
- 7.4 Drug and Drug Interaction
- 7.5 Clinical Significance and Risk Factors for Drug-Nutrient Interactions
- 7.6 Guidelines to Lower Risk and Wise Use of Drugs

UNIT 8 - NUTRITION, DIET AND CANCER

- 8.1 Cancer
- 8.2 Etiological Risk Factors in Cancer
- 8.3 Metabolic Alterations and Resultant Nutritional Problems/Clinical Manifestations Associated with Cancer
- 8.4 Nutritional Requirements of Cancer Patients-General Guidelines
- 8.5 Dietary Management of Cancer Patients and Feeding Problems Related to Cancer Therapy
- 8.6 Cancer Prevention

UNIT 9 - NUTRITIONAL CARE IN WEIGHT MANAGEMENT

- 9.1 Weight Imbalance-Prevalence and Classification
- 9.2 Guidelines for Calculating Ideal Body Weight
- 9.3 Obesity
- 9.4 Management of Obesity
- 9.5 Underweight

UNIT 10 - NUTRITIONAL MANAGEMENT OF EATING DISORDERS

- 10.1 Eating Disorders-A Review
- 10.2 Anorexia Nervosa
- 10.3 Bulimia Nervosa
- 10.4 Eating Disorder not Otherwise Specified (EDNOS)
- 10.5 Binge Eating Disorder
- 10.6 Management of Eating Disorders
- 10.7 Nutritional Management of Eating Disorders

UNIT 11 - NUTRITIONAL MANAGEMENT OF CORONARY HEART DISEASES

- 11.1 Coronary Heart diseases (CHD)
- 11.2 Common Disorders of Coronary Heart Diseases and their Management
- 11.3 Prevention of Coronary Heart Diseases

UNIT 12 - NUTRITIONAL MANAGEMENT OF METABOLIC DISEASES-I: DIABETES MELLITUS

- 12.1 Diabetes Mellitus
- 12.2 Management of Diabetes
- 12.3 Exercise and Drugs
- 12.4 Education
- 12.5 Prevention

UNIT 13 - NUTRITIONAL MANAGEMENT OF METABOLIC DISEASES-II: GOUT AND INBORN ERRORS OF METABOLIS

- 13.1 Gout
- 13.2 Inborn Errors of Metabolism

UNIT 14 - NUTRITIONAL MANAGEMENT OF GASTROINTESTINAL DISEASES AND DISORDERS

- 14.1 Gastrointestinal Diseases and Disorders

UNIT 15 - NUTRITIONAL MANAGEMENT IN LIVER, GALL BLADDER AND PANCREATIC DISEASES

- 15.1 Liver Diseases
- 15.2 Nutritional Management of Liver Diseases
- 15.3 Gall Bladder and Biliary Tract Diseases
- 15.4 Pancreatic Diseases

UNIT 16 - NUTRITIONAL MANAGEMENT OF RENAL DISEASES

- 16.1 Physiology of the Kidney
- 16.2 Assessment of Kidney Function: Diagnostic Tests
- 16.3 Common Renal Diseases
- 16.4 General Principle of Dietary Management in Renal Diseases
- 16.5 Acute and Chronic Nephritis
- 16.6 Nephrotic Syndrome
- 16.7 Acute Renal Failure (ARF)
- 16.8 Chronic Renal Failure (CRF)
- 16.9 End Stage Renal Disease (ESRD)
- 16.10 Renal Calculi
- 16.11 Commonly Available Commercial Enteral Nutrition Formulas for Renal Patients

UNIT 17 - NUTRITIONAL MANAGEMENT OF NEUROLOGICAL DISORDERS

- 17.1 Common Neurological Disorders
- 17.2 The Central Nervous System (CNS)-Some Relevant Physiological Aspects
- 17.3 Neurological Diseases: Feeding and Nutritional Issues-General Goals of Nutritional Care
- 17.4 Dysphagia
- 17.5 Alzheimer's Disease
- 17.6 Parkinson's Disease
- 17.7 Epilepsy
- 17.8 Neuro Trauma
- 17.9 Spinal Trauma

UNIT 18 - PEDIATRIC AND GERIATRIC NUTRITION-SPECIAL CONSIDERATIONS

- 18.1 Pediatric Problems and Nutritional Management
- 18.2 Geriatric Nutrition

II Year

Paper-VI Public Nutrition (MFN-006)

Unit-1 Concept of Public Nutrition

- 1.1 Introduction
- 1.2 Understanding the Terms : Nutrition, Health and Public Nutrition
- 1.3 Public Nutrition
- 1.4 Health Care
- 1.5 Role of Public Nutritionists in Health Care Delivery

Unit-2 Public Nutrition : Multidisciplinary Concept

- 2.1 Introduction
- 2.2 Multiple Causes of Public Nutrition Problems
- 2.3 Multidisciplinary Approach to Solving Nutrition Problems
- 2.4 Role of Agriculture in Nutrition
- 2.5 Distribution of Food Products
- 2.6 Storage of Food Products
- 2.7 Application of Science and Technology to Improve Food Supply
- 2.8 Food and Nutrition Security
- 2.9 Food Behavior

Unit-3 Nutritional Problems-I

- 3.1 Introduction
- 3.2 Protein Energy Malnutrition (PEM)
- 3.3 Micronutrient Deficiencies

Unit-4 Nutritional Problems-II

- 4.1 Introduction
- 4.2 Vitamin Deficiencies
- 4.3 Fluorosis
- 4.4 Lathyrism

Unit-5 Health Economics & Economics of Malnutrition

- 5.1 Introduction
- 5.2 Health Economics
- 5.3 Malnutrition and its Economic Consequences
- 5.4 Economics in Nutrition
- 5.5 Economic Evaluation of Malnutrition

Unit-6 Population Dynamics

- 6.1 Introduction
- 6.2 Demography, Demographic Transition and Demographic Cycle
- 6.3 Population Trends in India

- 6.4 Population Structure
- 6.5 Vital Statistics and Implication of Vital Statistics in Population Growth
- 6.6 Population Policy
- 6.7 Relationship 'between Fertility, Nutrition and Quality of Life

Unit-7 Assessment of Nutritional Status In Community Settings-I

- 7.1 Introduction
- 7.2 Nutritional Assessment - Goals and Objectives
- 7.3 Methods of Nutritional Assessment
- 7.4 Indirect Assessment of Nutritional Status
- 7.5 Direct Assessment of Nutritional Status
- 7.6 Nutritional Anthropometry
- 7.7 Methods of Assessing Nutritional Status in Individuals
- 7.8 Methods of Assessment of Nutritional Status of Community

Unit-8 Assessment of Nutritional Status In Community Settings-II

- 8.1 Introduction
- 8.2 Clinical Assessment
- 8.3 Biochemical Assessment
- 8.4 Dietary Assessment

Unit-9 Nutrition Monitoring & Nutrition Surveillance

- 9.1 Introduction Monitoring
- 9.2 Nutrition Monitoring
- 9.3 Nutrition Surveillance System (NSS)

Unit-10 Nutrition Policy & Programmes

- 10.1 Introduction
- 10.2 National Nutrition Policy (NNP)
- 10.3 Nutrition Programmes
- 10.4 Integrated Child Development Services (ICDS) Programme
- 10.5 Nutrient Deficiency Control Programmes
- 10.6 Supplementary Feeding Programmes
- 10.7 Food Security Programmes
- 10.8 Self Employment and Wage Employment Schemes

Unit-11 Review of National Nutrition Programmes

- 11.1 Introduction
- 11.2 Rationale for National Nutrition Programmes
- 11.3 Appraisal of Nutrition Programmes
- 11.4 Limited Impact of National Nutrition Programmes in India
- 11.5 Costs of Improving Nutrition Situation in India

Unit-12 Strategies To Combat Public Nutrition Problems-I

- 12.1 Introduction
- 12.2 Strategies to Combat Public Nutrition Problems
- 12.3 Diet or Food Based Strategies
- 12.4 Nutrient Based Approach : The Medicinal Approach to Combat Public Nutrition Problems
- 12.5 Selecting/Implementing an Intervention Strategy

Unit-13 Strategies To Combat Public Nutrition Problems-II

- 13.1 Introduction
- 13.2 Immunization
- 13.3 Supplementary Feeding Programmes
- 13.4 Improving the Quality of Food Produced by Genetic Approaches
- 13.5 Clean Water, Sanitation and Street Foods and Strategies to Improve the Street Foods
- 13.6 Improving Food and Nutrition Security

Unit-14 Programme Management & Administration

- 14.1 Introduction
- 14.2 Concept of Programme Management and Administration
- 14.3 Personnel Management
- 14.4 Planning, Implementing and Evaluating Public Nutrition Programmes
- 14.5 Techniques for Conducting Situational Analysis/Needs Assessment
- 14.6 Principles of Good Governance and Management

Unit-15 Conceptualization & The Process of Nutrition Education

- 15.1 Introduction
- 15.2 Understanding the Need and Scope of Nutrition Education
- 15.3 Importance of Nutrition Education
- 15.4 Potential Challenges and the Constraints of Nutrition Education
- 15.5 Theories of Nutrition Education
- 15.6 Process of Nutrition Education Communication
- 15.7 The Conceptual Phase

Unit-16 Nutrition Education Communication Programme : Formulation

- 16.1 Introduction
- 16.2 Setting Objectives of a Nutrition Education Communication Programme
- 16.3 Identifying a Target Audience
- 16.4 Designing Messages
- 16.5 Choosing the Media and Multi-Media Combinations
- 16.6 Development of a Communication Strategy

Unit-17 Nutrition Education Communication Programme : Implementation

17.1 Introduction

17.2 Implementation Process – An Overview

17.3 Production of Communication Support Materials

17.4 Designing an Effective Training Programme

17.5 Executing the Communication Interventions

17.6 Social Marketing : A Key to Successful Public Health Programmes

17.7 Community Participation

Unit-18 Nutrition Education Programme : Evaluation

18.1 Introduction

18.2 Evaluation – Basic Concept

18.3 Purpose of Evaluation of NEC Programme

18.4 Developing an Evaluation System for NEC Programme

18.5 Types of Evaluation

18.6 Major Features of Evaluation

18.7 Conducting a Dynamic and Participatory Evaluation

18.8 Contribution of Nutrition Education Programme to Changes in Behaviors

Paper-VII
Entrepreneurship & Food Service Management (MFN-007)

Unit-1 History & Development of Food Service System

- 1.1 Introduction
- 1.2 Food Service Establishments
- 1.3 Types of Food Service Establishments
- 1.4 Understanding Management
- 1.5 Approaches to Food Service Management
- 1.6 Managing an Organization

Unit-2 Planning A Food Service Unit

- 2.1 Introduction
- 2.2 The Management Process
- 2.3 Planning : What is it?
- 2.4 Preparing a Planning Guide or Prospectus
- 2.5 Registration of the Unit
- 2.6 Systems Approach in Food Service

Unit-3 Setting Up Food Service Unit

- 3.1 Introduction
- 3.2 Layout and Design : Definition
- 3.3 Planning Team
- 3.4 Planning of a Layout : Various Phases
- 3.5 Architectural Features
- 3.6 Evaluation of Plans
- 3.7 Energy and Time Management
- 3.8 Financial Status Analysis

Unit-4 Entrepreneurship & Food Service Management

- 4.1 Introduction
- 4.2 A Conceptual Perspective of Entrepreneurship
- 4.3 Creativity, Innovation and Entrepreneurship
- 4.4 Business Requirements for Food Products
- 4.5 Entrepreneurship Development and Training
- 4.6 Merchandising Skills Specially for Entrepreneurs

Unit-5 Food Management : Menu Planning – Focal Point of All Activities In Food Service Establishments

- 5.1 Introduction
- 5.2 The Importance of Menu and Menu Planning in Food Service Organization
- 5.3 The Types of Menu and its Applications

5.4 Steps in Menu Planning and its Evaluation

Unit-6 Food Management : Purchase And Storage

- 6.1 Introduction
- 6.2 Purchasing : A Food Management Activity
- 6.3 The Market and the Buyer
- 6.4 Mode of Purchasing
- 6.5 Methods of Purchasing
- 6.6 Identifying Needs and Amount s to Buy
- 6.7 Receiving and Inspecting Deliveries
- 6.8 Storage Space
- 6.9 Store Room Management

Unit-7 Food Management : Quality Food Production – Planning & Control

- 7.1 Introduction
- 7.2 Principles of Food Production
- 7.3 Food Production Systems Management
- 7.4 Production Control
- 7.5 Safeguard in Food Production

Unit-8 Quantity Food Production : Kitchen Production

- 8.1 Introduction
- 8.2 General Procedures Used in Institutional and Commercial Food Production
- 8.3 Basic Cookery Process and their Application to Quantity Production
- 8.4 Types of Equipments

Unit-9 Food Management : Records & Controls

- 9.1 Introduction
- 9.2 Records and Controls : Basic Concept
- 9.3 Records Necessary for a Catering Unit
- 9.4 Reviewing Actual Performance Reports
- 9.5 Cost Control

Unit-10 Food Management : Delivery & Service – Goals & Issues

- 10.1 Introduction
- 10.2 Food Service Systems
- 10.3 A Food Service Systems Model and its Significance
- 10.4 Methods of Delivery Service System
- 10.5 Choice of Delivery Systems and Services Attached to It
- 10.6 Use of Disposables in the Service Area

Unit-11 Food Management : Delivery & Service Styles

- 11.1 Introduction
- 11.2 Different Types of Service in Food Service Establishments
- 11.3 Types of Service in a Restaurant
- 11.4 Summary of Service Styles
- 11.5 Specialized Forms of Service

Unit-12 Food Management : Types of Food Service Systems

- 12.1 Introduction
- 12.2 Introduction to Food Service Systems
- 12.3 Types of Service Systems
- 12.4 Distribution and Service in Food Service System
- 12.5 Conduct and Appearance of Service Unit Personnel

Unit-13 Personnel Management Leadership

- 13.1 Introduction
- 13.2 Leadership
- 13.3 Who are Leaders ?
- 13.4 Leadership Styles

Unit-14 Personnel Management : Staff Planning & Management

- 14.1 Introduction
- 14.2 Staff Planning & Management
- 14.3 Employment Process
- 14.4 Staff Recruitment and Selection
- 14.5 Staff Placement
- 14.6 Staff Training
- 14.7 Laws Governing Staff Planning and Management

Unit-15 Personnel Function – Work Productivity

- 15.1 Introduction
- 15.2 Meaning and Definition of Productivity
- 15.3 Understanding Format Relationships and Duties
- 15.4 Design of Jobs
- 15.5 Work Design
- 15.6 Work Measurement in Food Service Operations
- 15.7 Productivity Improvement

Unit-16 Plant & Equipment Maintenance

- 16.1 Introduction

- 16.2 Plant and Equipment in Food Services
- 16.3 Types of Plant and Equipment
- 16.4 Maintenance of Plant and Equipment
- 16.5 Safety Concerns
- 16.6 Checks and Inspections
- 16.7 Equipment Suppliers

Unit-17 Plant Sanitation & Safety

- 17.1 Introduction
- 17.2 Sanitation and Safety
- 17.3 Considerations Necessary for an Efficient Cleaning Programme
- 17.4 Post Cleaning Care and Cleaning of Premises and Surroundings
- 17.5 The 3-E's of Safety
- 17.6 Standards, Policies and Schedules

Unit-18 Issues In Food Safety

- 18.1 Introduction
- 18.2 Microbiology and Food Safety
- 18.3 Food Borne Illness
- 18.4 Modes of Disease Transmission
- 18.5 Conditions that Could Lead to Food Spoilage
- 18.6 Importance of Pest Control
- 18.7 Hygienic Food Handling

Unit-19 Issue In Worker Safety & Security

- 19.1 Introduction
- 19.2 Personal Hygiene and Sanitary Practices
- 19.3 Sanitation Training and Education for Food Service Workers
- 19.4 Hazard Analysis and Critical Control Point (HACCP)
- 19.5 Work Place Safety
- 19.6 Sanitation Regulations and Standards

Paper-VIII
Principle of Food Science (MFN-008)

Unit-1 Introduction To Food Science & Simple Sugars

- 1.1 Introduction
- 1.2 Introduction to Food Science as a Discipline and Modern Developments
- 1.3 Carbohydrates in the Diet – Classification
- 1.4 Sugars : Chemistry, Functionality and their Role in Food Industry
- 1.5 Sweeteners

Unit-2 Food Polysaccharides & Their Applications

- 2.1 Introduction
- 2.2 Characteristics and Functional Properties of Native and Modified Starches
- 2.3 Food Hydrocolloids – An Introduction
- 2.4 Non Starch Polysaccharides
- 2.5 Algal Polysaccharides
- 2.6 Seed Gums
- 2.7 Exudate Gums
- 2.8 Microbial Polysaccharides

Unit-3 LIPIDS

- 3.1 Introduction
- 3.2 Lipids-Introduction and Sources
- 3.3 Lipids-Classification and Composition
- 3.4 Functional Properties of Food Lipids
- 3.5 Deep Fat Frying
- 3.6 Deteriorative Changes in Fats and Oils
- 3.7 Antioxidants-Preventing the Deteriorative Changes in Fats and Oils

Unit-4 Proteins

- 4.1 Introduction
- 4.2 Proteins-Classification, Composition and Biological Functions
- 4.3 Functional Properties of Proteins
- 4.4 Protein Concentrates, Isolates and Hydrolysates and their Applications

Unit-5 Vitamins & Minerals

- 5.1 Introduction
- 5.2 Vitamins
- 5.3 Minerals

Unit-6 Enzymes & Pigments

- 6.1 Introduction
- 6.2 Introduction to Enzymes

6.3 Biotechnological Applications of Enzymes

6.4 Natural Pigments

Unit-7 Sols, Gels & Emulsions

7.1 Introduction

7.2 Colloids, Colloidal Systems and Applications of Colloidal Chemistry to Food Preparations

7.3 Definition and Properties of Solutions

7.4 Sols, Gels and Suspensions

7.5 Foams

7.6 Emulsions

Unit-8 Properties of Food

8.1 Introduction

8.2 Introduction to Quality Attributes of Food

8.3 Gustation-the Sense of Taste

8.4 Texture in Foods

8.5 Colour

Unit-9 Chemical, Physical & Nutritional Alterations Occurring In Foods During Processing & Storage

9.1 Introduction

9.2 Food Processing in Perspective

9.3 Alterations Occurring in Fruits and Vegetables

9.4 Alterations Occurring in Milk and Milk Products

9.5 Alterations Occurring in Meat and Poultry

9.6 Alterations Occurring in Fish

9.7 Alterations Occurring in Egg

9.8 Alterations Occurring in Cereal, Cereal Products and Legumes

9.9 Alterations Occurring in Nuts, Oil seeds and Spices

Unit-10 Introduction To Food Processing

10.1 Introduction

10.2 Food Spoilage and Causes

10.3 Food Processing

10.4 Traditional Methods of Food Processing

Unit-11 Methods of Food Processing-1

11.1 Introduction

11.2 Methods of Food Processing

11.3 Thermal Processing

11.4 Dehydration

11.5 Preservation by Concentration

Unit-12 Methods of Food Processing-2

- 12.1 Introduction
- 12.2 Freezing
- 12.3 Microwave Processing
- 12.4 Food Irradiation
- 12.5 Fermentation
- 12.6 Deep Fat Frying
- 12.7 Use of Salt, Sugar and Chemicals as Preservatives

Unit-13 Pre & Primary Processing-Some Basic Concepts

- 13.1 Introduction
- 13.2 Production, Harvesting and Handling of Fresh Foods
- 13.3 Preparation of Raw Materials for Processing
- 13.4 Primary Processing of Cereals, Pulses and Oilseeds

Unit-14 Product Development & Evaluation

- 14.1 Introduction
- 14.2 Need for Product Development
- 14.3 How to Develop a New Product ?
- 14.4 Sensory Evaluation
- 14.5 New Products and Ingredients
- 14.6 Shelf-life

Paper-IX
Research Methods and Biostatistics

Unit-1 Basic Concepts

- 1.1 Introduction
- 1.2 Epidemiology : An Introduction
- 1.3 Biostatistics
- 1.4 What is Research and Scientific Approach ?

Unit-2 Formulation of Research Problem

- 2.1 Introduction
- 2.2 Selection of a Suitable Problem
- 2.3 Specifying the Objectives of the Research Problem
- 2.4 Formulating Hypothesis
- 2.5 The Design of Research
- 2.6 Sample Size Considerations

Unit-3 Design Strategies In Research : Descriptive Studies

- 3.1 Introduction
- 3.2 Design Strategies in Epidemiological Research
- 3.3 Descriptive Studies

Unit-4 Design Strategies In Research : Analytic Studies

- 4.1 Introduction
- 4.2 Analytic Studies
- 4.3 Observational Studies
- 4.4 Experimental/Intervention Studies

Unit-5 Issues In The Design & Conduct of Selected Epidemiological Research Designs

- 5.1 Introduction
- 5.2 Descriptive Research
- 5.3 Observational Studies
- 5.4 Experimental Research

Unit-6 Methods of Sampling

- 6.1 Introduction
- 6.2 Concept of Sampling
- 6.3 Methods of Sampling
- 6.4 Key Points at a Glance

Unit-7 Research Tools-I : Questionnaire, Rating Scale, Attitude Scale & Tests

- 7.1 Introduction
- 7.2 Scales of Data Measurement
- 7.3 Characteristics of a Good Research Tool
- 7.4 Types of Tools and their Uses

Unit-8 Research Tools-II : Interview, Observation & Documents

- 8.1 Introduction
- 8.2 Types of Tools and their Uses

Unit-9 Data Collection

- 9.1 Introduction
- 9.2 Concept of Data
- 9.3 Methods of Data Collection
- 9.4 Ensuring the Quality of Data
- 9.5 Key Points at a Glance

Unit-10 Tabulation & Organization of Data

- 10.1 Introduction
- 10.2 Types of Data : Quantitative and Qualitative
- 10.3 Processing of Quantitative Data
- 10.4 Tabulation and Organization of Quantitative Data
- 10.5 Graphical Presentation of Quantitative Data
- 10.6 Qualitative Data

Unit-11 Reference Values, Health Indicators & Validity of Diagnostic Tests

- 11.1 Introduction
- 11.2 Reference Values : Basic Concept
- 11.3 Probability : A Measure of Uncertainty
- 11.4 Indicators : Measures of Mortality and Morbidity
- 11.5 Measure for Validity of Diagnostic Tests

Unit-12 Analysis of Data

- 12.1 Introduction
- 12.2 Analysis of Quantitative Data
- 12.3 Analysis of Qualitative Data

Unit-13 Statistical Testing of Hypothesis

- 13.1 Introduction
- 13.2 Classification of Statistical Tests
- 13.3 Parametric Tests
- 13.4 Non-parametric Tests and Application of Chi-square Test

Unit-14 Data Management, Analysis & Presentation

- 14.1 Introduction
- 14.2 Introduction to SPSS
- 14.3 Features of SPSS for Windows
- 14.4 Get yourself Acquainted with SPSS
- 14.5 Menu Commands and Sub-commands
- 14.6 Basic Steps in Data Analysis
- 14.7 Defining, Editing and Entering Data
- 14.8 Data File Management Functions
- 14.9 Running a Preliminary Analysis
- 14.10 Understanding Relationship Between Variables : Data Analysis
- 14.11 SPSS Production Facility
- 14.12 Statistical Analysis System (SAS)
- 14.13 Nudist

Paper-X
Understanding Computer Application

Unit-1 Introduction To Computers

- 1.1 Introduction
- 1.2 What is a Computer ?
- 1.3 Some Important Fundamental Terms
- 1.4 What are the Parts of a Computer ?
- 1.5 What Goes on Inside a Computer ?

Unit-2 Windows Interface

- 2.1 Introduction
- 2.2 Text Interface
- 2.3 Graphical User Interface
- 2.4 Some Important Windows Concepts
- 2.5 The Windows Start Button
- 2.6 Windows Properties
- 2.7 Working with Multiple Windows
- 2.8 Control Panel

Unit-3 Windows Explorer & Applications

- 3.1 Introduction
- 3.2 Explorer and My Computer
- 3.3 Windows Applications
- 3.4 System Tools

Unit-4 Introduction To Internet

- 4.1 Introduction
- 4.2 Internet Architecture
- 4.3 Internet Tools
- 4.4 How to use the Internet ?
- 4.5 Microsoft Outlook Express

Unit-5 Introduction To Ms-Word

- 5.1 Introduction
- 5.2 Starting Ms-Word
- 5.3 Document Window
- 5.4 Manipulating Text
- 5.5 Getting Help with Ms-Word

Unit-6 Formatting Documents

- 6.1 Introduction
- 6.2 Viewing Documents
- 6.3 Formatting Text
- 6.4 Formatting Paragraphs
- 6.5 Formatting Pages
- 6.6 Advance Formatting

Unit-7 Desktop Publishing Features

- 7.1 Introduction
- 7.2 Proofreading a Document
- 7.3 Printing Documents

Unit-8 Advanced Features In Word

- 8.1 Introduction
- 8.2 Mail Merge
- 8.3 Tables

Unit-9 Introduction To Microsoft PowerPoint

- 9.1 Introduction
- 9.2 Starting PowerPoint
- 9.3 Creating a New Presentation
- 9.4 Inserting and Deleting slides in a Presentation
- 9.5 Viewing a Presentation
- 9.6 Entering and Editing Text
- 9.7 Enhancing Text Presentation
- 9.8 Working with Colour and Line Style
- 9.9 Adding Headers and Footers

Unit-10 Advanced Features of Microsoft PowerPoint

- 10.1 Introduction
- 10.2 Inserting Objects in Presentation
- 10.3 Checking Slides
- 10.4 Choosing a Set Up for Presentation Component
- 10.5 Printing Presentation Components
- 10.6 Setting up and Running a Slide Show on Screen

Unit-11 Introduction To Microsoft Excel

- 11.1 Introduction
- 11.2 Starting Excel
- 11.3 Navigating Worksheets

- 11.4 Entering Data
- 11.5 Excel Functions
- 11.6 Selecting Cell Ranges
- 11.7 Creating Text, Number and Data Series
- 11.8 Editing Worksheet Data
- 11.9 Worksheets Formatting
- 11.10 Changing Column Width and Row Height
- 11.11 Auto Formats
- 11.12 Aligning Data
- 11.13 Working With Graphic Objects
- 11.14 Charts

Unit-12 Advanced Features of Microsoft Excel

- 12.1 Introduction
- 12.2 Using Formulas, Functions and Macros
- 12.3 Entering Functions
- 12.4 Macros
- 12.5 Printing Worksheet Data
- 12.6 Creating Headers and Footers
- 12.7 Protecting Data Within Workbooks
- 12.8 Sharing Data With Other Applications
- 12.9 Working With Data Forms Using Lists
- 12.10 Pivot Tables

Unit-13 Computer Maintenance & Troubleshooting

- 13.1 Introduction
- 13.2 Computer Maintenance
- 13.3 Software Troubleshooting
- 13.4 Hardware Troubleshooting

Unit-14 Ergonomics

- 14.1 Introduction
- 14.2 Repetitive Motion Injuries
- 14.3 Upper Body Risk Factors
- 14.4 Lower Body Risk Factors
- 14.5 Seating
- 14.6 Eyes and Vision