DR. VIRENDRA SWARUP INSTITUTE OF VOCATIONAL STUDIES

SYLLABUS

CVESD DIPLOMA IN DIETICIAN

COURSE CODE: AHE39

COURSE NAME: CVESD DIPLOMA IN DIETICIAN

COURSE DURATION: ONE YEAR

SESSION: 2024-25

DR. VIRENDRA SWARUP INSTITUTE OF VOCATIONAL STUDIES, MC ROBERT GANJ, CIVIL LINES, KANPUR (UP) 208001

CourseCode	CourseName
AHE39-01	COMMUNICATIVE ENGLISH & COMUTER FUNDAMENTALS

CO1	Inculcate Process of Communication and identify barriers in communication.
CO2	Develop skills for working in team and individually.
CO3	Inculcate soft skills and develop personality through participation in group discussion, mock interview, group and individual presentation.
CO4	Describetheusageofcomputersandwhycomputersareessentialcomponentsinbusinessandsociety.
CO5	Understandingtheconceptof Computer memoryandinput/outputdevicesof Computers andhowitworks and recognizethebasic terminology usedin computerprogramming.

Course Outcomes: At the end of the course, the student will be able to,

UNIT-I

The Process of Communication:

Communication, the Process of Communication, Barriers ofCommunication, Different Types of Communication, Characteristics and Conventions ofConversation, Conversational Problems of Second/Foreign Language Users, DifferenceBetween Conversation and Other Speech Events.

UNIT- II

Soft Skills Training:

Soft Skills Practice, Personality Development, Participating in Group Discussion and JobInterviews, Time Management Presentation Skills, Leadership Skills, LateralThinking, Team Work and Interpersonal Skills, Emotional Intelligence, Self-Confidence and Attitude.

UNIT- III

Speaking Skills and Presentation:

Presentation Design and Delivery. Monologue Dialogue,Group Discussion. Effective Communication/ Mis-Communication. Interview. Effective Writing, Report Writing, Resumeand letter Writing.

UNIT-IV

Introduction to Computer: Definition - History & Generation of Computer (From First to 5^{th}) -Applications of Computer – Advantages of Computer – Terms related to Computer - Characteristicsof Computer: Speed, Storage, Versatility and Diligence – Hardware & Software. Block Diagram andWorking Principle of Computer - Types of Computer: On the Basis of

Working - Analog, Digital &Hybrid, On the Basis of Size - Main frame, Mini Computer, Super Computer, Work station, MicroComputer, Desktop Computer, Laptop Computer

UNIT-V

Memory: Units, Representation, Types - Primary memory: RAM, ROM,PROM, EPROM, EEPROM, DDR Secondary memory: Hard disk, CD, DVD, Blue ray Disc, PenDrive Magnetic tape & Zip disk – **CPU:** Components of CPU - Mother board, Hard disk, RAM,ROM, Processor, SMPS & Connecting wire - Graphics Card, Sound Card, Network Card – Modem;**Input, Output devices**: Keyboard, Mouse, Scanner, Digital Camera, Joystick, Pen drive, Monitor,Printer,Plotter– Connectingport– Serial,parallel–USBport.

Referential Books:

1. Wren and Martin -English Grammar and Composition
2. B. K. Das- an Introduction to Professional English and Soft Skills
3. Barun K. Mitra- Personality Development and Soft Skills

CourseCode	CourseName	L	T	P	
AHE39-02	Diet Methods	3	0	0	

CO1	Students will be able to learn the terminology of the subject. The student will be able to understand the transition of diet from clear liquid to full-liquid to soft and then normal. The student will be able to study and understand the Diet and its principles.
CO2	This subject will develop and understanding of the structure and function of organs and organ systems in normal human body. The student will be able to apply basic nutrition knowledge in making foods choices and obtaining an adequate diet.
CO3	Provide basic knowledge of cells, tissues, blood and to understand anatomy and physiology of human body. The student will have knowledge of biochemical pathways of different nutrients, how they function biochemically and physiologically. To explain the process of digestion, absorption and metabolism of macronutrients and micronutrients.
CO4	The student will get information about the role of diet and the nutrients present in them. To enable the student to understand the chemical characteristics of different classes of nutrients
CO5	The student will learn and apply the latest in research-based nutrient needs of infants, children, adolescents, adults, pregnant and lactating females. The student gains competence on meeting nutrition needs and establishing dietary patterns to promote optimum health and reducing the impact of chronic diseases in the elderly.

Course Objectives• To understand the functions and role of nutrients, their requirements and the effect of deficiency and excess (in brief)

Course Outcomes• The student will be able to apply basic nutrition knowledge in making foods choices and obtaining an adequate diet.

UNIT-1

1. Definition of food, nutrition, health, Dimension of health and function of food- Physical, social and mental health. 2. Food guide – Basic food groups, my plate 3. Carbohydrates: Classification, functions, Digestion& absorption, food sources, storage in body, deficiency diseases. 4. Proteins – Classification, composition, functions, digestion and absorption, food sources, storage in body, essential & non-essential amino acids, functions, Protein deficiency. 5. Fats & oils: Classification, composition, saturated and unsaturated fatty acids, functions, digestion and absorption, food sources, storage in body, deficiency. 6. Water - as a nutrient, function, sources, requirement, water balance & effect of deficiency. 7. Minerals - macro & micronutrients. - functions, sources. Bioavailability and deficiency of Calcium, Iron, Iodine, Sodium & Potassium (in very brief) 8. Vitamins (water & fat soluble) - definition, classification & functions. 1. Basic Concepts of Diet Therapy-Nutrition Care Process: Definition of MNT 2. Nutritional Assessment (ABCD), Nutritional Diagnosis, Nutrition Intervention, Monitoring & Evaluation of Nutritional Care 3. Modifications of the Normal Diet-General or Regular, Adequate or House Diet, Soft Diet, Liquid Diets- Clear Liquid Diet, Full Liquid Diet 4. Mode of Feeding- Enteral or Oral Route- Enteral (via) tube feeding- Parenteral – Peripheral Vein Feeding, Total Parental Nutrition (TPN) 5. Nutrition for Weight Management, Assessment of obesity – BMI, Waist Hip-Ratios, Skin folds

Thickness, Etiology – Genetic Factors, Physiological Factors, Behavioral factors, Treatment – Dietary Management, Fad diets and their consequences 6. Underweight– Etiology, Health hazards, Treatments. 7. Nutrition during Febrile Disorders: a) Classification of fevers b) Metabolism in fever c) General Dietary Considerations d) Acute & chronic fevers -Typhoid &Tuberculosis

UNIT 2:

1. Cell - Structure and functions. 2. Blood - Blood cells, Haemoglobin, Blood groups, Coagulation Factors, Anaemia1. Egg-Structure, Composition and Nutritive value of egg, Assessment methods for the quality of egg, Role of egg in Cookery, Preservation of egg. 2. Meat and meat Products-Definition of meat, classes of meat, Composition and Nutritive value of meat, Post-Partum changes, ageing, Tenderization, Curing, Cutting and Grading of meat and other fleshy foods, Role of meat in Cookery. 3. Sugars and Sugar Related Products-Nutritive value and Composition, Properties, Role of Sugar in Cookery, Artificial Sweeteners. 4. Spices and Condiments-General function of Spices, Specific Spices, Role of Spices in Cookery. 5. Beverages and Appetizers-Classification, Coffee, Chicory, Tea, Types of tea. 6. Current trends in food science.

UNIT-3

1. Basics of energy metabolism, nutrition & dietetics -Unit of measuring energy, calorific value of food, BMR & factors affecting it, SDA of food, calculation of energy requirement, balanced diet, nutrition in health & diseases (protein energy malnutrition). 2. Chemistry of carbohydrates & their related metabolism - Introduction, definition, classification, biomedical importance Brief outline of metabolism: Glycogenesis &glycogenosis (in brief), Glycolysis, citric acid cycle & its significance, HMP shunt & Gluconeogenesis (in brief), regulation of blood glucose level. 3. Amino acids - Definition, classification, essential & non-essential amino acids. 4. Chemistry of Proteins & their related metabolism - Introduction, definition, classification, biomedical importance Metabolism: Transformation, Decarboxylation, Ammonia formation & transport, Urea cycle. 5. Chemistry of Lipids & their related Metabolism-Introduction, definition, classification, biomedical importance, essential fatty acids, identification of fats & oils (saponification no, acid no, iodine no, acetyl no, reichert- miesel no. etc.) Brief out line of metabolism: Beta oxidation of fatty acids, Ketosis, Cholesterol &it's clinical significance, Lipoproteins in the blood composition & their functions in brief, Atherosclerosis. 6. Enzymes-Introduction, definition, classification, coenzymes, isoenzymes, properties, factors affecting enzyme action, enzyme inhibition, diagnostic value of serum enzymes - Creatinine kinase, Alkaline phosphatase, Acid phosphatase, LDH, SGOT, SGPT, Amylase, Lipase, Carbonic anhydrase etc. 7. Acid base balance concepts & disorders - pH, Buffers, Acidosis, Alkalosis

UNIT-4

1. Nutrition in pregnancy - Physiological changes in pregnancy, nutritional requirements. food selection, complications of pregnancy. 2. Nutrition during lactation - Physiology of lactation, nutritional requirements. 3. Nutrition during infancy - growth & development, nutritional requirements, breast feeding, infant formula, introduction to supplementary foods. 4. Nutrition during early childhood (Toddler/Preschool)- Growth & nutrient need, nutrition related problems, feeding patterns. 5. Nutrition of school children- Nutritional requirement, importance of snacks, school lunch. 6. Nutrition during adolescence - Growth & nutrient needs, food choices, eating

habits, factor influencing needs. 7. Nutrition during adulthood - Nutritional requirements, feeding pattern. 8. Geriatric nutrition- Factors affecting food intake and nutrient use, nutrient needs, nutrition related problems.

UNIT-5

1. Cereal-Definition, Structure, and composition, Nutritive value, Processing- Milling, polishing. parboiling, flaking, parching, roasting, products of cereals, breakfast cereals, role pf cereals in cookery. 2. Pulses: composition and nutritional value, processing of pulses-soaking, germination, milling, decortication, fermentation, toxicants naturally occurring in pulses, role of pulses in cookery. 3. Fruits and vegetables: Classifications, composition and nutritive value, role of fruits and vegetables in cookery, changes during cooking, effect of heat, acid and alkali, storage, 4. Milk and milk products: Definition, types of milk, Composition and nutritive value of milk, processing of milk, and milk products. 5. Fats and Oils-Composition and Nutritive value of fat, Refining and Processing of fats, specific types of fat, role of fat in cookery. 6. Nuts and Oil seeds: Nutritive Value, Classification & importance

ReferentialBooks:

- Antia F.P., Philip Abraham, Clinical Dietetics and Nutrition, Oxford University Press; 4th edition.
- Kathleen Mahan L., SylniaEscott-Stump, Krause's food, nutrition and diet therapy (11thedition). Saunders company, London.
- Passmore R. and Davidson S. (1986) Human nutrition and Dietitics. Liming stone publishers.
- Robinson C.H. Careme, Chenometh W.L., Garmick A.E. (1986) 16th edition Normal Therapeutic nutrient. Publish by Mc Millan Company New Yo

CourseCode	CourseName	L	T	P
		0	0	3
AHE39-03	PRACTICAL-I			

1. Weights and measures.
2. Introduction to Recommended Dietary Allowances/Nutritive value of foods.
3. Preparation of essential macro (protein, fibre) and micronutrient (calcium, iron vitamin C, A and B) rich recipe, calculation of nutritive value and cost per serving.
4. Visit to analytical lab for demonstration of protein and fat estimation.

CourseCode	CourseName	L	T	P
		0	0	3
AHE39-04	PRACTICAL-II			

1. The students shall do the diet survey of patients suffering from various diseases.
2. They shall maintain Logbook regarding it
3. At the end of the semester their Logbooks will be evaluated by the faculty concerned.