DEPARTMENT OF NUTRITION

NAME OF THE ADD-ON COURSE (2022-2023):

PATHOPHYSIOLOGY AND DIET THERAPY

Name of Course Coordinator: Dr.Raktima Bandyopadhyay

Name of the Teachers involved: Dr.Raktima Bandyopadhyay and Ms. Anushree Rana

Duration of Course : 36 hours

Course outcome:

Students can utilize knowledge from the physical and biological sciences as a basis for understanding the role of food and nutrients in health and disease processes. They can provide nutrition counseling and education to individuals, groups, and communities throughout the lifespan using a variety of communication strategies and evaluate nutrition information based on scientific reasoning for clinical, community, and food service application. They can apply technical skills, knowledge of health behavior, clinical judgment, and decision-making skills when assessing and evaluating the nutritional status of individuals and communities and their response to nutrition intervention. They can implement strategies for food access, procurement, preparation, and safety for individuals, families, and communities. Students can perform food management functions in business, health-care, community, and institutional arenas. They can practice state-of-the-art nutrition care in collaboration with other healthcare providers in interdisciplinary settings within the bounds of ethical, legal, and professional practice standards. They may also provide culturally competent nutrition services for individuals and communities. Students will utilize advanced principles of health literacy, including critical thinking skills, literature searches, data collection and interpretation, necessary for the implementation of food and nutrition services in professional settings.

SYLLABUS:

COURSE: PATHOPHYSIOLOGY AND DIET THERAPY

Dietitian and Diet Therapy:

Concept of Diet Therapy

Role and responsibilities of Dietitian (Administrative, Community, Hospital

Interpersonal relationship with patient, Nutritional counseling)

Gastrointestinal diseases and disorders and their management:

Basic structure and function of human digestive system and enzymes

Gastrointestinal diseases and disorders: Diarrhoea, Constipation, Peptic ulcer, Irritable bowelsyndrome, Malabsorption Syndrome, Lactose intolerance, Protein-losing enteropathy. Diagnostic Tests for the G.I. diseases and Medical Nutrition Therapy (MNT) for gastrointestinal tract diseases/disorders

Liver-diseases and diet-therapy

Liver diseases: Viral Hepatitis, Cirrhosis of liver, Hepatic encephalopathy, Wilson's disease; Liver function Test. Dietary care and management in liver-diseases

Diseases of cardiovascular system:

Hypertension and its pathophysiology, Dyslipidemia and its types, Pathophysiology of Atherosclerosis, Arteriosclerosis, Ischemic heart disease and Myocardial infarction

Heart failure, Cardiomyopathy, Stroke, Risk-factors (blood lipids, hypertension, obesity, diabetes, hyperlipidemias, smoking, and stress), Nutrient guidelines and diet therapy of heart diseases

***Kidney diseases*:**

Acute kidney injury, Chronic renal failure and its different stages, Glomerular

Diseases (Nephritic syndrome and nephrotic syndrome), Renal stone and Nephrolithiasis, Medical Nutrition Therapy for different kidney disease

Diabetes:

Types of Diabetes (Type 1, Type 2, Impaired Glucose regulation, Gestational diabetes); Symptoms, Diagnosis (OGTT, Urinary sugar, Blood glucose, Glycosylated Hemoglobin); Complications(Hypoglycemia, Ketoacidosis, Infections, Heart disease and kidney disease). Diet in Diabetes, Recommended Calorie intake and intake of carbohydrates, proteins, fats, vitamins/minerals, Role of fruits and vegetables, dietary fibre, fenugreek seeds for Diabetics. Dietary Guidelines, Glycemic Index, Role of other factors (Exercise, Drugs, Education)

Protozoan diseases: Malaria and Amoebiasis

Bacterial diseases:Tuberculosis, Cholera, Typhoid and Urinary tract infection

Viral Diseases:Dengue and Coronavirus disease (COVID-19)

References:

- Mahan, L. K. and Escott Stump. S. (2008) Krause's Food & Nutrition Therapy 12th ed. Saunders-Elsevier
- Shils, M.E., Shike, M, Ross, A.C., Caballero B and Cousins RJ (2005) Modern Nutrition in Health and Disease. 10th ed. Lipincott, William and Wilkins.
- Gibney MJ, Elia M, Ljungqvist&Dowsett J. (2005) Clinical Nutrition. The Nutrition Society Textbook Series. Blackwell Publishing Company
- Garrow, J.S., James, W.P.T. and Ralph, A. (2000)Human Nutrition and Dietetics. 10th ed. Churchill Livingstone.
- Marian M, Russel M, Shikora SA. (2008) Clinical Nutrition for Surgical Patients. Jones and Bartlett Publishers.
- Vinay Kumar, Abul K. Abbas, Nelson Fausto and Jon Aster; Robbins &CotranPathologicBasis of Disease. 8th Edition. Publisher: Elsevier.
- Jo Ann Zerwekh, AZ Jo Carol Claborn, Tom Gaglione; Mosby's Pathophysiology Memory Note Cards: Visual, Mnemonic, and Memory Aids for Nurses, 2nd Edition. Publisher: Elsevier.
- Richard Mitchell, Vinay Kumar, Abul K. Abbas, Nelson Fausto and Jon Aste; PocketCompanion to Robins &Cortan Pathological Basis of Disease. 8th Edition. Publisher: Elsevier.
- Kathryn L. McCance & Sue E. Huether; Pathophysiology: The Biologic Basis for Diseasein Adults and Children. Publisher: Elsevier.
- By Porth, Carol; Essentials of Pathophysiology; Concepts of Altered Health States. Publisher Lippincott Williams & Wilkins.
- Sue E Huether, Kathryn RN; Understanding Pathophysiology. 5th Edition. Publisher: Elsevier.

EVALUATION:

After the completion of course, examination will be taken for 100 marks. On the basis of marks obtained in examination the result will be prepared.

The gradation system for the declaration of results will be as follows:

GRADING SYSTEM:

LEVEL	EXCELLENT	VERY GOOD	GOOD	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	POOR	FAIL
GRADE	A+	A	B+	B	C	D	E	F
MARKS RANGE	90-100	80-89	70-79	60-69	50-59	40-49	33-40	0-32