**COURSE CONTENT**

**Topic 1: ‘Overview on normal values for physical examination and routine laboratory tests with nutritional implications’**

1. Familiarize with the acceptable values for each biochemical parameters and
2. Understand the threshold of abnormality .

**Topic 2: Case study on overweight child with insulin resistance (social and medical history, diagnosis, treatment )**

1. Take an appropriate dietary and medical history.
2. ( including family history of overweight or obesity, and social history regarding physical activity, sedentary activity, and
3. other lifestyle issues. -Perform an appropriate physical examination for an overweight or obese child or adolescent;
4. evaluate the patient for other signs and symptoms of chronic diseases associated with obesity (e.g., hypertension, insulin resistance, dyslipidemia, sleep apnea, orthopedic problems, etc.).
5. Identify factors responsible for increasing weight in order to recommend suitable dietary or lifestyle changes.
6. Recognize the importance of the patient and patient’s family involvement in making changes as well as the social, emotional, and psychological factors that may support the development of obesity and may influence the response to intervention.

**Topic 3: Demonstration signs of PEM and vitamin deficiencies**

1. Identify signs and symptoms
2. Understand and remember clinical parameters of diagnosis
3. Apply nutrition therapy

**Topic 4: Case study on malnutrition and refeeding syndrome in children**

1. Describe the physiologic processes that occur when refeeding an undernourished patient.
2. Identify potential clinical manifestations of the refeeding syndrome and explain the most common laboratory abnormalities that may occur during refeeding.
3. Summarize the clinical recommendations for minimizing or avoiding the complications associated with refeeding.

**Topic 5 : Case study on nutrition therapy for metabolic stress and  burn injury**

1. Apply the knowledge of the pathophysiology of trauma and metabolic stress in order to provide nutrition support for the critically ill patient.
2. State specific indications for the use of indirect calorimetry in critically ill patients.
3. Understand the metabolic response to burn injury and the related nutritional considerations.

**Lab Performance**

**Topic 6: Case study on hypertension and cardiovascular diseases**

* 1. Define pre-hypertension and discuss the rational for this diagnosis.
  2. List the diet and lifestyle factors that may contribute to the development of hypertension.
  3. Describe the parameters of the DASH diet for the treatment of hypertension.
  4. Prioritize medical nutrition therapy and exercise goals for patients with hypertension

**Topic 7: Demonstration signs of anaemia and iodine deficiency disorders**

1. Identify the signs and symptoms
2. remember the clinical terms associated with the disease condition

**Topic 8: Case study on adult type 2 diabetes: transition to insulin**

1. Integrate an insulin regimen with nutrition therapy and provide appropriate recommend- dations for carbohydrate-to-insulin ratios and correction dosage.
2. Develop a nutrition care plan—with appropriate measurable goals, interventions, and strategies for monitoring and evaluation—that addresses the nutrition diagnoses for this case.
3. Explain the appropriate use and interpretation of self-monitoring of blood glucose to adjust rapid-acting insulin

**Topic 9: Case study on chronic renal failure advancing to dialysis**

1. Given the medical history, physical examination, and laboratory data, identify factors affecting the nutritional status of a patient with chronic kidney disease (CKD stage 5) initiating haemodialysis.
2. Describe the appropriate medical nutrition therapy for a patient with CKD on haemodialysis changing to peritoneal dialysis.

**Topic 10 : HOSPITAL VISIT**

**TOPIC 11: FINAL EXAM :**