

NUTRITION

Course Description

This course is designed to help students understand that nutrition is an integral component of health as nutrients play a vital role in the growth, development and maintenance of the body.

General Objectives

Upon completion of this course, the students shall be able to:

- 1 Describe the principles of nutrition and dietetics and its relationship to the human body in health and disease.
- 2 Describe the balanced diet in promotion of health
- 3 Apply this knowledge in providing therapeutic diet in care of the sick.
- 4 Demonstrate skills in selection, preparation and preservation of food.

Total Hours – 30

Unit.	Learning Objectives	Content	Hr.	Teaching learning activities	Methods of assessment
I	Describe the relationship between nutrition and health	Introduction a) Meaning of food, nutrition, nutrients etc. b) Food Habits and customs c) Factors affecting nutrition d) Changing concepts in food and nutrition. e) Relation of Nutrition to Health	2	Lecture cum discussions. Explain using charts	Short answer types Objective type
II	Describe the classification of food.	Classification of food a) Classification by origin: - Food and animal origin - Food of plant origin b) Classification by chemical composition and sources - Carbohydrates - Proteins - Fats - Minerals - Vitamins - Water c) Classification by predominant functions - Body building food - Energy giving food - Protective food	2	Lecture cum discussions. Real food items Exhibits charts	Short answers Objective type Essay type

Unit.	Learning Objectives	Content	Hr.	Teaching learning activities	Methods of assessment
		d) Classification by nutritive value <ul style="list-style-type: none"> - Cereals and millets - Pulses and legumes - Vegetables - Nuts and oil seeds - Fruits - Animal food - Fats and oils - Sugar and jiggery - Condiments and spices - Miscellaneous food. 			
III	Explain normal dietary requirements Demonstrate skill in calculating normal food requirements.	Normal Dietary Requirements <ol style="list-style-type: none"> a) Energy: Calorie, Measurement, Body Mass Index, Basal Metabolic Rate – determination and factors affecting b) Balanced Diet – nutritive value of foods, calculation for different categories of people, normal food requirement calculation. Menu plan. Combination of food affecting and enhancing the nutritive value of the diet. c) Budgeting for food, low cost meals, food substitutes. d) Diseases and disorders caused by the imbalance of nutrients. e) Food allergy – causes, types, diet modifications in gluten, lactose and protein intolerance etc. f) Food intolerance - inborn errors of metabolism 	4	Lecture cum discussions. Charts exhibits Real food Practical exercise	Short answer Objective type Essay type
IV	Describe the principles and various methods of preparation, preservation and storage of food.	Food Preparation, Preservation & Storage <ol style="list-style-type: none"> a) Principles of cooking, methods of cooking and the effect of cooking on food and various nutrients. Safe food handling, health of food handlers. 	2	Lecture cum discussions. Field visit to food processing unit.	Short answer type Objective type

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		b) Methods of food preservation— household and commercial, precautions. c) Food storage – cooked and raw, household and commercial, ill effects of poorly stored food. d) Food adulteration and acts related to it.		Demonstration exhibits	Evaluation of exhibit preparation.
V	Describe about therapeutic diet	Therapeutic Diet a) Diet modification in relation to medical and surgical condition of the individual such as Protein Energy Malnutrition (PEM), Diabetes, Cardio Vascular disease, Hepatitis, Renal, Gouts, Irritable Bowel Syndrome (IBS), Obesity, cholecystectomy, partial gastrectomy, gastrostomy, bariatric surgery and colostomy etc. b) Special diet – low sodium diet, fat free diet, diabetic diet, bland diet, high protein diet, low protein diet, low calorie diet, geriatric diet, iron rich diet, liquid diet, semi-solid diet, soft diet and high fiber diet etc c) Factors affecting diet acceptance, feeding the helpless patient. d) Health education on nutrition needs and methods in diet modification .	8	Lecture cum discussions. Practical of planning Therapeutic diet Demonstration Charts Exhibits	Short answers Objective type Essay type
VI	Describe the concept of community nutrition	Community Nutrition a) Nutritional problems and programs in India b) Community food supply, food hygiene and commercially prepared and grown food available locally. c) National and international food agencies – Central food training research institute (CFTRI), Food and agriculture organization	4	Lecture cum discussions. Videos Government of India nutrition manuals.	Short answer Objective type

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		(FAO), National Institute of Nutrition (NIN), Food Safety and Standards Authority of India (FSSAI), CARE (Cooperative for Assistance and Relief Everywhere), National Institute of Public Cooperation and Child Development (NIPCCD) etc.		Visit to the local food preparation / processing agency.	
VII	Demonstrate skill in preparation of common food items.	Preparation of diet / practical a) Beverages: hot and cold, juice, shakes, soups, lassi, barley water b) Egg preparation: egg flip, scramble, omlet, poached egg c) Light diet: porridges, gruel, khichari, dahlia, kanji, boiled vegetables, salads, custards. d) Low cost high nutrition diets - chikki, multigrain roti	8	Lecture cum discussions Cookery practical	Practical evaluation