

Course Code : ANU 403

Course Title : Applied Human Nutrition

Credit Hours : 2 (2+0)

Full Marks: 50

Theory: 50

Practical: 0

OBJECTIVES

Upon the completion of this course, the students will be able to recognize nutrients deficiency diseases occurring in human body and they will be aware of maintaining good health.

I. SYLLABUS

Nutrition and human health: Human health needs, Major Nepalese health problems; Nutritional guides for health promotion, Nutrition guidelines for prevention of heart diseases and Cancer, Relation of food and nutrition to health. Food classification, bioactive phytochemicals in food and their mechanism of action to promote human health. Role of Carbohydrates, Proteins, Lipids, Minerals and Vitamins in human body. Nutritional deficiency disorders in human body: Protein-energy malnutrition, causes of malnutrition. Method to solve malnutrition problems., naturally occurring toxicants' in foods. Chemicals contamination in foods.

Foods fortification: principles and applications .Nutrition improvement program in Nepal. Food processing, effect of food processing on nutritional status. Water, electrolyte and mineral balance.

Diet, nutrition and digestive disease (coronary heart disease, diabetes mellitus; cancer, gastrointestinal problem, renal disorders, urolithiasis, food factors and cataract).

II. COURSE OUTLINE

A. Lecture

S.N.	Topics	No. of Lectures
1.	Nutrition and human health, human health needs major Nepalese health problem.	1
2.	Nutritional guides for health promotion: cancer and heart disease, Foods and their classification	2
3.	Relation of food and nutrition to health	1
4.	Nutrition and ageing, nutrition and mental function, weight control, nutrition and cancer, heart disease and diabetes mellitus	2
5.	Bioactive phytochemicals in foods and their mechanism of action to promote health	1
6.	Carbohydrates: Classification, Dietary fiber and its role. Physiologic effects of dietary fiber. Dietary fiber, recommendation, Special functions of carbohydrates in body tissues.	3
7.	Lipids: Classification, functions, requirements and food sources, cholesterol and its role to Promote human health. Cholesterol and health concern	3

8.	Proteins: Essential and non- essential amino acids, functions of proteins, proteins requirement Factors affecting protein requirement, protein turnover, functions of dietary protein. Measure of protein requirements, deficiency symptoms of proteins	3
9.	Minerals: Major and Minor minerals functions of minerals in human body. Deficiency Symptoms and food sources	3
10.	Water, electrolyte and mineral balance	2
11.	Energy metabolism and physical work performance, factors influencing basal metabolism, Energy requirements for various physiological functions	2
12.	Nutritional deficiency disorders: Protein -energy malnutrition, causes of malnutrition, Methods to solve malnutrition, governments strategy to solve malnutrition	2
13.	Food toxicities: Naturally occurring toxicants' in food, chemical contaminants in foods.	1
14.	Food processing: Effect of food processing on nutritional status	1
15.	Diet, nutritional and degenerative disease (a) Coronary heart disease (b) Diabetes mellitus (c) Cancer (d) gastro- intestinal problems (e) Rent disorders (f) Urolithiasis (g) Food factors and Cataract.	3
<hr/> Total		30

REFERENCES

Sue Rod Well Williams, 1989. Nutrition and Diet Therapy, Times Mirror / Mob by College Publishing, St. Lous, Toronto, Boston , Losaltos -

Mahatab and Banji N. Pralhad Rao. Vinodini Reddy, Vinodini Reddy: 1986. Text Book of Human Nutrition, Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi, Calcutta,.