

Department of Biotechnology

OEC: Nutrition and Health

Course Title: Nutrition and Health	Course code: 21BSCOEBT
Total Contact Hours: 42 Hrs.	Course Credits: 03
Internal Assessment Marks: 40	Duration of SEE: 03 Hrs.
Semester End Examination Marks: 60	

Course Outcomes (COs):

At the end of the course, students will be able to:

1. Study the concepts of food, nutrition, diet and health
2. To apply the best practices of food intake and dietary requirements
3. Acquire knowledge about various sources of nutrients and good cooking practices

OEC: Nutrition and Health

Unit	Description	Hours
1	Introduction: Concepts of nutrition and health. Definition of Food, Diet and nutrition, Food groups. Food pyramids. Functions of food. Balanced diet. Meal planning. Eat right concept. Functional foods, Prebiotics, Probiotics, and antioxidants	8
2	Nutrients: Macro and Micronutrients - Sources, functions and deficiency. Carbohydrates, Proteins, Fats – Sources and calories. Minerals –Calcium, Iron, Iodine.	8
3	Vitamins: Fat soluble vitamins –A, D, E & K. Water soluble vitamins – vitamin C Thiamine, Riboflavin, Niacin. Water–Functions and water balance. Fibre – Functions and sources. Recommended Dietary Allowance, Body Mass Index and Basal Metabolic Rate.	8
4	Nutrition and Health: Methods of cooking affecting nutritional value. Advantages and disadvantages. Boiling, steaming, pressure cooking. Oil/Fat – Shallow frying, deep frying. Baking. Nutrition through lifecycle. Nutritional requirement, dietary guidelines: Adulthood, Pregnancy, Lactation, Infancy- Complementary feeding, Pre-school, Adolescence, geriatric. Nutrition related metabolic disorders- diabetes and cardiovascular disease.	9
5	Functional food: Overview; definition, classification of functional food, functional food	9

	<p>science, food technology and its impact on functional food development, key issues in Indian functional food industry and nutraceutical. Relation of functional foods and nutraceutical (FFN) to foods and drugs.</p>	
<p>References</p> <ol style="list-style-type: none"> 1. Sri Lakshmi B, (2007), Dietetics. New Age International publishers. New Delhi 2. Sri Lakshmi B, (2002), Nutrition Science. New Age International publishers. New Delhi. 3. Swaminathan M. (2002), Advanced text book on food and Nutrition. Volume I. Bappco 4. Gopalan.C., RamaSastry B.V., and S.C.Balasubramanian (2009), Nutritive value of Indian Foods.NIN.ICMR.Hyderabad. 5. Mudambi S R and Rajagopal M V, (2008), Fundamentals of Foods, Nutrition & diet therapy by New Age International Publishers, New Delhi 		

Date

Course Coordinator

Subject Committee Chairperson

