

# GUJARAT TECHNOLOGICAL UNIVERSITY

B.E Semester: 4

## FOOD PROCESSING TECHNOLOGY

Subject Name: FOOD NUTRITION AND BIOCHEMISTRY

Sr.No	Course contents
1.	<b>Enzymes:</b> Introduction, Structure & characteristics, Specificities, Catalysis & regulation, Nomenclature & classification, Co-factors, mechanism of enzyme action, Factors affecting enzyme catalysed reactions and Enzyme inhibition, Role and applications of enzymes in food, Endogenous enzymes.
2.	<b>Digestion and Absorption of Food in Human System:</b> Digestion and Absorption of protein, carbohydrate, lipids and micro-nutrients, Factor affecting on digestion and absorption,
3.	<b>Metabolism:</b> Anabolism and Catabolism of carbohydrate, protein and lipid with major metabolic pathways, Role of hormone in metabolism.
4.	<b>Food &amp; Nutrition:</b> Definitions, functions, role of nutrients and non nutrient components, RDA for individuals, Balance diets for infants, children, adults,
5.	<b>Vitamins and Minerals:</b> Introduction, Classification of vitamins, major source, functions and deficiency symptoms.
6.	<b>Processing Aspects of Nutrients:</b> Causes of loss of nutrients in processing like blanching, pasteurization, drying, irradiation, milling etc.. , Addition of nutrients like fortification of food groups like cereals, milk and milk products, fats and oils etc.

### **Reference Books:**

1. Food Chemistry, O.R. Fennema, 2<sup>nd</sup> Edn. Marcel Dekkar Inc.
2. Principles of Biochemistry, A.L. Lehninger, CBC.
3. Biochemistry of Foods, M. Eskin, Academic Press.
4. Food & Nutrition, M. Swaminathan.
5. Nutrition and Dietetics, Shubhangini Joshi, 2<sup>nd</sup> Edn. Tata McGraw Hill Co. Ltd.