

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. E. SEMESTER: V**  
**FOOD PROCESSING TECHNOLOGY**

Subject Name: **Design and Formulation of Foods**

Subject Code: **151401**

Teaching Scheme				Evaluation Scheme		
Theory	Tutorial	Practical	Total	University Exam (Theory) (E)	Mid Sem Exam (Theory) (M)	Practical (I)
4	0	2	6	70	30	50

Sr. No.	Course Content	No. of Lectures
1.	<b>Nutritional Concept in Food Design:</b> Nutritive value and anti-nutritional factors present in cereals, pulses, oil seeds , fruits, vegetables, fish, meat and eggs, effect of processing on nutritive value of foods.	05
2.	<b>Menu Planning:</b> Explanation of terms, Principles of planning menus, Steps involved in planning menus, Food guide pyramid.	04
3.	<b>Infant Foods:</b> Formulation of weaning foods, Protein energy malnutrition, Formulating diet for preschool going (2-5 years) children.	04
4.	<b>Balanced Diet:</b> Diets during normal life cycle, Nutrition from infancy to adolescence, Nutritional requirements of different age groups, Geriatric nutrition, Nutrition for athletes.	08
5.	<b>Therapeutic Diet:</b> Diet therapy and types of therapeutic diet, Diet for diabetic mellitus, Diet for cardio vascular disease, Diet for gastro intestinal disease.	08
6.	<b>Functional Foods:</b> Concepts for functional foods design, prebiotics & probiotics, nutraceuticals, designer foods.	07
7.	<b>Anti-Nutritional Factors in Foods:</b> Trypsin inhibitors, Phytins, Tannins, Oxalates, Goitrogens, Aflatoxins.	05
8.	<b>Fermented Foods:</b> Preparation and maintenance of microbial cultures for food fermentation, Nutritional significance of traditional fermented foods.	08

## **Reference Books:**

1. Nutritive value of Indian Foods by Gopalan C, Ramshastri BV, Balasubramaniam SC. National Institute of Nutrition, Hyderabad.
2. Handbook of Indigenous Fermented Foods' by K.H. Steinkrus, Marcel Dekkar.
3. Proceedings of Technical Session of IFCON-98' AFTS (I), CFTRI, Mysore.
4. Clinical dietetics and nutrition by FP Antia.
5. Dietetics by Srilaksmi.