



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Bachelor of Engineering

Level: UG

Branch: Food Engineering & Technology

Subject Code: 3175102

Subject Name : Food Quality, Safety Standards and Certification

WEF Academic Year :	2022-23
Semester :	7
Category of the Course :	Professional Elective Course-IV

**Prerequisite:Nil**

**Rationale:** This subject provides knowledge of food quality management, safety regulations, and certification systems essential for ensuring consumer health and legal compliance. It prepares students to implement quality assurance practices, food safety audits, and global standards in the food industry.

**Course Scheme:**

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	P		Theory		Practical		
			ESE (E)	PA(M)	ESE (V)	PA (I)		
3	0	2	4	70	30	30	20	150

**Course Content:**

Sr. No.	Course Content	No. of Hours	% of Weightage
1	UNIT I Concept and meaning of Food quality and food Safety, Importance of quality control and assurance, food laws and regulations. National and international food laws, Governing bodies. Application and specifications for food standards, food products, additives, preservatives, colouring agents, emulsifiers, stabilizers and antioxidants, Natural toxins.	10	25
2	UNIT II Methods/techniques for assessment of quality of different foods. Safety aspects of water and beverages such as soft drinks, tea, coffee, cocoa, Safety assessment of food contaminants and pesticide residues,	8	25
3	UNIT III Quality assurance - Total quality management: GMP, GHP, GLP, GAP, sanitary and hygienic practices. Hazard analysis and critical control point: quality manuals, documentation and audits. Nutritional labeling, bar coding, meaning and importance	12	25
4	UNIT IV Food adulteration: common adulterant in food; simple screening, detection techniques and control of food adulteration.. Municipal health services,	10	25



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	Prevention and control of food, water and air borne diseases.		
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## Reference Book:

- Handbook of Analysis and Quality Control for Fruit and Vegetable Products (English, Hardcover, Ranganna S.)
- Quality Control in the Food Industry, Volume 2 edited by S Herschdoerfer

## Suggested Course Practical List:

- Study of PFA, FPO, Agmark, BIS and HACCP for common foods: Cereals and flours, Pulses, nuts and oilseeds, Fruits and vegetables, Oil, butter, ghee, vanaspati and other fats, Milk and milk products, Sugar, jaggery and miscellaneous foods, Meat, fish and poultry, Eggs
- Physical and chemical methods/techniques for assessment of food quality.
- Quality evaluation of processed foods with cereal, pulse, vegetable, fruit, milk, milk products, meat, fish and poultry as main component by chemical and sensory methods
- Market survey of processed foods with reference to food labeling
- Visit to Consumer Forum/Food Quality Laboratory
- Food adulteration tests for different foods

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