

**GENERIC ELECTIVE – GE-4-FT:
FOOD QUALITY MANAGEMENT**

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Food Quality Management	4	3	0	1	Class XII	NIL

LEARNING OBJECTIVES:

1. To introduce students to the field of food quality management
2. To impart knowledge on basic concepts of quality and safety in the food sector
3. To familiarize the students with the approaches, principles and programs which facilitate food quality management.
4. To help students understand the basics of preparing, evaluating and implementing a food quality policy on an on-going basis.

LEARNING OUTCOMES:

After completion of the course, the students will be able to:

1. Explain the association of food quality with food safety.
2. Appreciate the need for having a quality policy and work-specific standard operating guidelines in food-based organizations.
3. Contribute enthusiastically to the food quality management system.
4. Facilitate the development, implementation and evaluation of quality policy.

SYLLABUS OF GE-4-FT

**THEORY
(Credits 3: 45 Hours)**

UNIT I: Food Quality and Food Safety – an overview (18 Hours)

- *Unit Description:* This unit will introduce the students to the vast and emerging field of food quality, managing quality during food handling and its association with food safety.
- *Subtopics:*
 - Introduction to basic terms (quality, food quality, quality control, quality assurance, quality improvement, quality planning, quality assessment, quality management)
 - Characteristics of quality
 - Food quality attributes – Intrinsic and Extrinsic
 - Food quality management – scope (consumer and business perspectives)

- Role of food safety in food quality
- Food safety hazards and the role of FSSAI

UNIT III: Approaches to management of food quality

(17 Hours)

- *Unit Description:* This unit will explain to the students how a combination of approaches in different situations can help in managing resources and processes to result in achieving, maintaining, enhancing quality of food.
- *Subtopics:*
 - Quality control
 - Quality assurance
 - Total quality management
 - Quality management system

UNIT III: Quality management programs and standards for food industry (10 Hours)

- *Unit Description:* This unit will discuss the principles, procedures which can be followed in principle to maintain and achieve higher standards by the food industry.
- *Subtopics:*
 - HACCP (origin, key terms, principles, development and implementation and maintenance)
 - Codex Alimentarius 12 steps for application of HACCP
 - Quality management standards (ISO quality system standards eg; 9000:2000, 9001:2000, 9004:2000)
 - Procedures for auditing and certifications

Unit IV: Food quality policy and strategy

(10 Hours)

- *Unit Description:* Every food handling/processing unit must have a quality policy on the basis of which strategic plan of action can be made and implemented. This unit will help students understand how to prepare, evaluate and implement a quality policy.
- *Subtopics:*
 - Quality policy and strategy process (activities and decisions)
 - Quality policy and technological conditions
 - Tools and methods for quality strategy and policy
 - Organizational structure and procedures (Crosby's maturity grid, collaboration in food chain)
 - Quality cost analysis
 - Quality policy evaluation
 - Challenges in executing sustainable FQM

PRACTICAL (Credits 1: 30 Hours)

No. of Students per Practical Class Group: 10-15

24. Identification and removal of physical hazards rice grains, tea leaves, whole wheat flour and pulses.
25. Identification of microbes/parasites by use of prepared slides and specimens.
26. Develop educational aid on general principles of GMP.
27. Develop HACCP program for college canteen.
28. Project on developing a food quality management system for a bakery or milk/vegetable booth/canteen/food kiosk
29. Case study on quality policy of a multi-national food processing company

ESSENTIAL READINGS (Theory and Practical):

- Alli. I. (2003). Food Quality Assurance – Principles and Practices, CRC Press.
- Suri, S and Malhotra, A. (2014). Food Science, Nutrition and Safety. Dorling Kindersley Pvt. Ltd. (Pearson) India.
- Mathur, P. (2018). Food Safety and Quality Control. Orient Blackswan Private Limited.
- Pieterneel A.L and Willem JM. (2020). Food Quality Management – Technological and Managerial Principles and Practices

SUGGESTED READINGS:

- Ronald F. Cichy, and Jae Min Cha. (2009). Food Safety and Quality Management, American Hotel and Lodging Educational Institute.
- Knechtges, L.I. (2012). Food Safety-Theory and Practice, USA: Jones and Barlette Learning.
- Kalia, M. (2010). *Food quality management*. Agrotech Pub. Academy.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.