

16FT306 FOOD SAFETY AND STANDARDS

Hours Per Week :

L	T	P	C
3	1	-	4

Total Hours :

L	T	P	WA/RA	SSH/HSH	CS	SA	S	BS
45	15	-	10	45	-	-	5	5

Course Description and Objectives:

The course deals with global food safety laws, standards and regulations. The objective of the course is to impart knowledge to students on national and international food standards along with application of ISO and HACCP in food processing industries.

Course Outcomes:

The student will be able to:

- understand about toxins from bacteria and fungi.
- know about different food additives, anti-nutrients, anti-vitamins used in food processing.
- explain about heavy metal contamination in foods.
- discuss about food safety and microbial standards.

SKILLS:

- ✓ *Identify the different sources of food contamination.*
- ✓ *Categorize the contaminants on the basis of severity.*
- ✓ *Prepare quality control charts for a given process.*
- ✓ *Identify different allergens in foods.*
- ✓ *Identify natural toxin present in food.*

UNIT - 1**L-9 T-3**

INTRODCUTION: Introduction, Concept of food safety and standards (FSSAI), Licensing and registration. FAO: Overview of Organization structure, Objectives & Functions.

UNIT - 2**L-9 T-3**

INDIAN FOOD LAWS: AGMARK: AGMARK Act & Rules: Scope, definitions, Certification policy & Procedure, laboratory approvals, Action on noncompliance. BIS: Evolution of BIS, Scope, Definitions, Power & Functions of BIS, Licensing procedure. Export and Import Laws and Regulations, Export (Quality Control and Inspection) Act, 1963.

UNIT - 3**L-9 T-3**

ISO: ISO 22000, 9001: 2008: Evolution of ISO 9001: 2008, PDCA cycle, Introduction, Salient features, Advantages, Certification & Auditing. FSMS – 22000:2005: Various elements included in the standard, Introduction to the family of ISO 22000 standards, Comparison of ISO 9001:2008 vs. ISO 22000:2005

UNIT - 4**L-9 T-3**

INTERNATIONAL FOOD LAWS: Codex: Implications on trade in light of SPS and TBT, Alimentarius: Role of CAC and its committees, Introduction to OIE and IPPC, Other International Food Standards (e.g. European Commission, USFDA etc). WTO: Introduction to WTO Agreements: SPS and TBT Agreement Total Quality Management; GMP/GHP; GLP, GAP.

UNIT - 5**L-9 T-3**

HACCP: Food related hazards: Biological hazards, Chemical hazards, Physical hazards, Trace chemicals. Microbiological considerations in food safety. HACCP: Terminology, Principles, Identification of CCPs, Application of HACCP System and the logic sequence involved.

TEXT BOOKS:

1. C. A. Roberts, "The Food Safety Information Handbook", 2nd edition, Oryx Press, 2001
2. R. H. Schmidt and G. E. Rodrick, "Food Safety Handbook", 3rd edition, John Wiley & Sons, 2005.

REFERENCE BOOKS:

1. N. Rees and D. Watson, "International standards for food safety", 1st edition, Aspen publishers, Gaithersburg, Maryland. 2000.
2. P. L. Knechtges, "Food safety: Theory and Practice", 1st edition, Jones and Bartlett learning, UK, 2012.

ACTIVITIES:

- *Identify Hazards and categorize them based on their severity*
- *Construct a chart with allergens associated with various food products.*
- *Prepare HACCP plan for any food industry*