

FST-242 Food Safety 3 (3-0)

Educational objectives:

The course helps understanding the basic concepts of food safety. The student will learn the importance of food safety and its impact on food production systems and food quality. The students will learn various food pathogens and their prevention strategies to control in food industry.

Course outcomes:

1. Understanding the importance of food safety.
2. Learning the fundamentals of food pathogens
3. Learning non-biological food safety hazards
4. Application of control strategies against various food pathogens

Theory:

- History and overview of food safety: introduction historical aspects
- Definitions, scope of the food safety.
- Foodborne infectious and microbial agents: types of infectious and microbialents, foodborne infections versus intoxications, foodborne bacteria, viruses, protozoans
- foodborne Toxic and physical Agents
- Basic food toxicology, microbial toxin, plant and animal toxin, agricultural chemicals, adulterants, food additives
- packaging materials, toxicants induced during food processing and industrial waste
- Food Safety: Principles of preventions
- Risk assessment and hazard analysis of foods: risk analysis and food safety
- The current food safety system
- National food control strategy, traceability system

Recommended Books:

1. **Harry Bremmers, Kai Purnhagen, 2018, Regulating and managing food safety in EU, Springer international publishing**
2. Helferich, W. and Winter, C.K. 2000. Food toxicology. Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, UK.
3. Knechtges, P.L. 2011. Food safety: theory and practice. Jones & Bartlett Learning, USA.
4. Motarjemi, Y. and H. Lelieveld. 2013. Food safety management: A practical guide

for the food industry. Elsevier Science, USA.

5. Schmidt, R.H. and Rodrick, G.E. 2004. Systems for food safety surveillance and risk prevention. In: Food safety handbook. John Wiley & Sons, Inc. New Jersey, USA.
6. Shibamoto, T., Taylor, S. and Bjeldanes, L. 1993. Introduction to food toxicology. Academic Press, London, UK.