

OPEN ELECTIVES

FNE 463 FOOD SAFETY

39 Hr (13× 3 units)

Course outcome:

At the end of this course the students will gain the knowledge regarding-

- CO 1. The importance of quality control system in foodplants.
- CO 2. Different types of food labeling and label claims
- CO 3. Different food laws including national and international laws.
- CO 4. Common testing methodologies for food adulterants and toxicants

Unit I: Food Quality: importance and functions of quality control. Methods of quality, assessment of food materials-fruits, vegetables, cereals, dairy products, meat, poultry, egg and processed food products. Food adulteration and food safety. HACCP, Sensory evaluation-introduction, panel screening,

Unit II: Sampling and specification of raw materials and finished products, Concept of Codex Alimentarius/USFDA/ISO 9000 series, rules and regulations for waste disposals. FSSAI and AGMARK

Unit III: Food packaging: Definitions, objectives and functions of packaging and packaging materials. Packaging requirements and selection of packaging materials; Types of packaging materials.

REFERENCES

- Swaminathan MS. Food Science & Experimental Foods—Ganesh & Co
- Srilakshmi B. Food Science, New Age International publication
- Frank AP, Modern Processing, Packaging & Distribution System for Food, AVI Vannonst and Reinhold.co.

FNE 464 FOOD PRESERVATION

39 Hr (13× 3 units)

Course outcome:

At the end of this course the students will be able to-

- CO 1. Describe different processing and food preservation techniques based on different food materials
- CO 2. Understand the food processing techniques, various methods used to preserve foods and factors influencing the shelf-life of the food products.
- CO 3. Know the different packaging techniques used for food packaging.
- CO 4. Describe the effects of different processing techniques on palatability and nutritive value of food.

Unit I: Principles of food preservation, methods of food preservation, Asepsis, removal of micro-organisms, maintenance of aseptic condition, classification of food for processing, chemicals in food preservation, food irradiation, concept of hurdle technology, Microwave heating.

Unit II: Preservation of food by high temperature-Pasteurization, sterilization, Canning. Preservation by low temperature-refrigeration, freezing, freeze drying, freezer burn

Unit III: Food dehydration and concentration: methods of drying and concentration, Osmotic dehydration, equipments for drying/dehydration, factors affecting drying process.

REFERENCES

- Desrosier N W & JN Desrosier The Technology of Food Preservation, AVI Publication
- Potty VH. & BM J Mulki, Food Processing- Oxford & IBH Publications
- Swaminathan MS Food Science & Experimental Foods—Ganesh & Co
- Srilakshmi B. Food Science, New Age International publication
- Frank AP, Modern Processing, Packaging& Distribution System for Food, AVI Van nonst and Reinhold.co.