

UCH721 FOOD TECHNOLOGY

L	T	P	Cr
3	0	0	3.0

Course Objectives

To impart knowledge of food processing, preservation, packaging, related hazards and safety.

Introduction: Chemical composition of foods, their properties and functions, Characteristic features of processed and natural food, Chemical and biochemical reactions in storage and handling of foods.

Unit Operations in Food Processing: Evaporation, Drying, Size reduction, Filtration, Freezing etc.

Methods for Food Preservation: Food spoilage-causes: mold, yeast, bacteria, enzymes, Food poisons: bacterial toxins, food borne illnesses, Food preservation by dehydration, concentration, fermentation, pickling and curdling, irradiation, Food preservation by adding preservatives, Classification and mode of action of food preservatives, Toxicity and safety of preservatives used in food.

Case Studies of a Few Food Processing Sectors: Dairy/milk products, Fruits and vegetables, Poultry, Meat and fish, Confectionary and/or other sectors, Methods for utilization of by-products and waste of food industries.

Food Packaging: Methods for packaging and storage of food materials, Modified atmosphere and controlled atmosphere storage, Canning, Aseptic packaging, Materials for food packaging, Test methods (Drop test etc.) for checking integrity of food packaging.

Food laws: Legislation, safety and quality control, Hazard Analysis and Critical Control Points (**HACCP**).

Course Learning Outcomes (CLO):

The students will be able to:

1. identify causes of food spoilage and selection of suitable food preservation method .
2. identify and evaluate various parameters associated with unit operation involved in food industries.
3. analyze food quality and effect of processing technique and packaging/storage on it.
4. analyze food related hazards and HACCP method.

Text Books:

1. Potter Norman N., Hotchkiss Joseph, *Food science*, CBS (2005).
2. Toledo Romeo, *Fundamentals of Food Process Engineering*, CBS (2007).

Reference Books:

1. Potty V.H. and Mulky, M.J., *Food Processing*, Oxford and IBH (1993).
2. Desrosier and Desrosier, *Technology of Food Preservation*, CBS publication (2006).
3. Frazier, *Food Microbiology*, Tata McGraw Hill, (2007).

Evaluation Scheme:

S. No.	Evaluation Elements	Weightage (%)
1	MST	30
2	EST	50
3	Sessional (May includes assignments/ quiz's etc)	20