

Syllabus for Certificate Course

FOOD SAFETY AND MICROBIOLOGY

Paper No.	Title of the paper	Marks allotted
		Theory
I	Fermentation technology	25
II	Social responsibilities	25
	Total	50

ANDHRA CHRISTIAN COLLEGE : GUNTUR

DEPARTMENT OF PG ZOOLOGY

TITLE OF THE PAPER: FOOD SAFETY AND MICROBIOLOGY

NO OF HOURS: 30

CREDITS: 02

Course Objective:

- To emphasize on the importance of food safety, food quality and food laws and regulations
- Enables the students in application of basic aspects of public health and food safety and quality surveillance system

Course Outcomes:

CO1: To familiarize students to apply protocol for safe food handling techniques, water and waste management

CO2: To understand the role of food packaging and the importance of Nutrition labeling.

CO3: To analyse consequences of food poisoning and infection on the health of individuals

CO4: To Understand the basic principles food preservation methods

UNIT-I FOOD HANDLING AND PUBLIC HEALTH

(7Hrs)

FOOD HYGIENE – Introduction, Definition, Basic aspects of Personal Hygiene, Disease transmission

FOOD HANDLING -preventing food borne illnesses, Education of food handler in handling and serving food, Importance of personal hygiene of the food handler, pest control

WATER TREATMENT- Sources, Principles of water purification, disposal of water.

WASTE DISPOSAL – Types of wastes, Solid wastes, liquid wastes, gaseous wastes and disposal.

UNIT- II FOOD PACKAGING AND LABELING

(8hrs)

FOOD PACKAGING – Definition, Functions, Classification, Laws related to packaging

NUTRITION LABELING – Nutrition labeling, health claims, and mandatory labeling provision.

UNIT -III FOOD ADULTERATION AND SPOILAGE:

(9hrs)

FOOD ADULTERATION – Definition of Adulteration, Adulterants, Types of adulterants, Food laws – PFA Act, Essential Commodities Act, FPO Act, MFPO, Milk and Milk products order, Food Standardisation and Regulation Agencies in India- Agencies at state level, Central food Laboratories, HACCP, powers of food inspectors.

FOOD SPOILAGE -Physical, chemical and microbiological spoilage of foods.

FOOD BORNE INFECTIONS - Cholera and Typhoid

UNIT-IV FOOD PRESERVATION:

(6Hrs)

INTRODUCTION TO FOOD PRESERVATION- Methods of preservation, General principles and applications of Food preservation.

PRESERVATION BY USE OF TEMPERATURE -- Preservation by use of high and low temperature.

PRESERVATION BY DRYING- Preservation by drying and use of salt and sugar

ENHANCEMENT OF FOODS – Food Fortification, Enrichment, Supplementation, Fermentation, Germination, Pre- and Probiotics and Organic Foods.

References:

1. Mahindra N. S, 2008, Food Additives, Characteristics, Detection and Estimation, APH Publishing Corporation, New Delhi
2. Wardlaw G.M, Hamp J S, 2007, Perspectives in Nutrition, 7th edition, Mc Graw Hill 3. The Food Safety and Standards Act along with Rules and Regulations, 2011, Delhi, Commercial Law Publishers (India) Pvt Ltd.
4. Khanna K et al, 2013, Text Book of Nutrition and Dietetics, Phoenix publications
5. Sethi P and Lakra P, Aahaarvigyaan, Poshanevam suraksha, 2015, Elite Publishing House.
6. Sharma S, Wadhwa A, 2003, Nutrition in the Community- a text book, Elite publishing house.