

SRI VENKATESWARA UNIVERSITY

B.Sc Degree Course in Food Science and Technology

Under CBCS w.e.f – 2021-22

Scheme of Instructions and Examinations.

Year	Semester	Course	Title of the Course	No. of Hrs/Week	No. of Credits	INT	UNI	Total Marks
IInd	III	III	Basic food micro biology	4	4	25	75	100
			Basic food micro biology Practicals	2	1	0	50	50

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SEMESTER- III

PAPER-III::BASICFOODMICROBIOLOGY

Teaching Hours: 4Hours/Week (Total –60Hours)

Credits:4

MidSem.Exam:25Marks

Sem. endexam:75Marks

UNIT-I:

(12Hours)

INTRODUCTION TO FOOD MICROBIOLOGY:

- Introduction, definition and Scope of food microbiology.
- Classification and general characteristics of microorganisms.
- Beneficial and harmful microorganisms.
- Inter-relationship of microbiology with other sciences.

UNIT-II:

(12Hours)

SAMPLING TECHNIQUES OF MICRO-ORGANISMS:

- Preparation of sample and its methods.
- Culturing techniques, methods of isolation and cultivation.
- Rapid methods for detection of specific microbes and toxins.
- Maintenance and preservation of pure cultures.

UNIT-III:

(12Hours)

FOODSPOILAGE:

- Definition and principles underlying spoilage.
- Chemical, Physical and physiological changes caused by microorganisms in food spoilage.
- Food borne illnesses – Food poisoning and food borne infections.

UNIT-IV:

(12Hours)

FOOD CONTAMINATION:

- Definition and Sources of food contamination.
- Microbiology of water – contamination and microbial standards.
- Microbiology of food commodities
- Contamination of fresh and processed foods.

UNIT-V:**(12Hours)****FOOD FERMENTATION:**

- Definition and types of food fermentation.
- Role of microorganisms in food fermentation.
- Types and process of fermented foods.

RECOMMENDED READINGS:

- 1) Frazier William C and Westhoff, Dennis C. Food Microbiology, TMH, New Delhi, 2004
- 2) Jay, James M. Modern Food Microbiology, CBS Publication, New Delhi, 2000
- 3) Garbutt, John. Essentials of Food Microbiology, Arnold, London, 1997.
- 4) Banwartt: Food Microbiology
- 5) Pelczar MJ, Chan E. C. and Krieg, Noel R. Microbiology, 5th Ed., TMH, New Delhi, 1993.

(LABORATORY COURSE- II)
PRACTICAL–III::BASICFOODMICROBIOLOGY

(At the End of Semester-III)

TeachingHours:2 Hours/Week
MidSem.Exam:0Marks

Credits:1

Sem.endexam:50Marks

1. Introduction to Microbiology Laboratory, safety Practices
2. Equipment used in microbiology laboratory.
3. Functioning and use of compound microscope
4. Cleaning and sterilization of glassware
5. Preparation and sterilization of nutrient broth
6. Preparation of slant, stab and plates using nutrient agar
7. Morphological study of bacteria and fungi using permanent slides
8. Simple staining
9. Gram's staining