

SRI VENKATESWARA UNIVERSITY
B.Sc Degree Course in Food Science and Technology
Under CBCS w.e.f – 2021-22

SEMESTER- IV
PAPER-IV:: FOOD PROCESSING AND PRESERVATION

TeachingHours: 4Hours/Week (Total –60Hours)
MidSem.Exam:25Marks
Endexam: 75Marks

Credits: 4
Sem.

UNIT-I: (12Hours)

INTRODUCTION:

- Introduction, definition and elements of food preservation
- Principles of food processing and preservation
- History and evolution of food processing and preservation
- Classification and types of food processing and preservation

UNIT-II: (12Hours)

PROCESSING AND PRESERVATION OF CEREALS & LEGUMES:

- Structure, Nutritional value and Composition of Cereals and Legumes
- Post-Harvest Processing and Technological Aspects of Cereals and Legumes
- Processing of Cereals and Legumes – Milling, Germination, Fermentation
- Quality and Grading of Cereals and Legumes
- Cereals, Millets and Legume based products and Byproducts

UNIT-III: (12Hours)

PROCESSING AND PRESERVATION OF FRUITS AND VEGETABLE PRODUCTS:

- Classification and nutritional value of fruits and vegetables
- Different storage methods for fruits and vegetables - Modified atmospheric storage, Cold storage, Controlled atmospheric storage etc.
- Preprocessing operations.
- Effect of food processing on nutritional quality of fruits and vegetables

UNIT-IV: (12Hours)

PROCESSING AND PRESERVATION OF MILK & MILK PRODUCTS

- Milk- Types of milk and their composition
- Pasteurization, Homogenization and Sterilization
- Manufacturing of different milk products and their preservation techniques
- Fortification and enrichment in milk processing

UNIT-V:

(12Hours)

PROCESSING AND PRESERVATION OF MEAT & MEAT PRODUCTS

- Structure, Classification, Nutritive Value and Composition of eggs and meat
- Quality check and grading of eggs and meat
- Meat processing and preservation- Smoking, Curing and Cooking
- Post mortem changes in meat (Rigor Mortis)
- Frozen meat and meat storage
- Processing of poultry, meat and eggs.

RECOMMENDED READINGS

1. Norman N Potter Joseph H and Hotchkirs, "Food Science", 5 th edition, CBS, Publishers Distributor, NewDelhi, 1996.
2. ShakuntalaManay N and ShadaksharaSwamy M, "Foods, Facts and Principles", New Age International Publishers (P) Ltd., New Delhi, 1987.
3. Ramaswamy H and MarcottM, Food Processing Principles and Applications, CRC Press,
4. Ranganna S, Handbook of Analysis and Quality Control for Fruits and VegetableProducts, 2nd ed. TMH Education Pvt. Ltd, 1986.
5. Girdharilal, Siddappaa, G.S and Tandon, G.L., Preservation of fruits &Vegetables,ICAR, New Delhi, 1998
6. W B Crusess. Commercial Unit and Vegetable Products, W.V. Special Indian Edition, Pub: Agrobios India.
7. Egg and Poultry Meat Processing – Stadelman WJ, Olson VM, Shemwell GA and Pasch S, 1988, Ellis Horwood Ltd.
8. . Rathore,NS et al. 2008.Fundamentals of Dairy Technology- Theory & Practices. HimanshuPubl

SRI VENKATESWARA UNIVERSITY
B.Sc Degree Course in Food Science and Technology
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(LABORATORY COURSE-IV)
PRACTICAL-IV:: FOOD PROCESSING AND PRESERVATION

(At the End of Semester-IV)

TeachingHours:2 Hours/Week

Credits:1

MidSem.Exam:0Marks

Sem.endexam:50Marks

1. Processing of cereals and their products
2. Germination of different grains and legumes-Study
3. Fermentation process-Preparation of fermented foods
4. Freezing and Dehydration of fruits and vegetables-A comparison study
5. Basic quality tests of milk
6. Processing and preservation of various milk products
7. Grading and evaluation of eggs
8. Processing and preservation of different egg and meat products
9. Visit to the food industries

B.Sc Degree Course in Food Science and Technology
Under CBCS w.e.f – 2021-2

PAPER-V: FOOD QUALITY CONTROL

Teaching Hours: 4Hours/Week (Total–60Hours)
Credits: 4
MidSem.Exam:25Marks Sem. End exam: 75Marks

UNIT-I (12 Hours)

- Definition and Principles of food Quality control–Raw material control, processed food control and finished product inspection.
- Factors related to food quality.

UNIT-II (12 Hours)

- Standard systems for quality control of foods-National and International standardization systems.
- Indian food standards- Voluntary and Obligatory standards (PFA, FPO, MMPO, AGMARK etc.).

UNIT-III (12 Hours)

- Food quality testing methods by organoleptic, chemical and Microbial methods.
- Food quality testing of liquid and solid foods.
- Functions of food quality in food processing Industries.

UNIT-IV (12 Hours)

- Quality control methods- GMP and GHP practices.
- HACCP-principles and structured approach.
- Role of CIP's in food processing.

UNIT-V (12 Hours)

- Quality standards of milk and milk products.
- Quality standards of fruits and vegetables.
- Quality standards of Cereals, Pulses and its products.
- Quality standards of eggs, poultry and meat.

RECOMMENDED READINGS:

1. Amerine, Pangborn & Roessler, Principles of sensory evaluation of food,

- Academic Press, London, 1965.
2. DeMan, 3rd edition, Principles of Food Chemistry, Springer, 2007.
 3. Meilgard, Sensory evaluation Techniques, 3rd ed CRC Press LLC, 1999.
 4. Yeshajahu Pomeranz & Clifton E. Meloan, Food Analysis & Theory & Practice, 1st Indian ed. CBS Publisher & Distributors, New Delhi, 2002
 5. Mahindra-S.N.-Food safety –A techno-legal analysis-Tata McGrawhill publishers 2000.
 6. Food science-Srilakshmi(2001)2nd edition, New age international publishers-(2001).

Under CBCS w.e.f – 2021-2

(LABORATORY COURSE-V)
PAPER-V: FOOD QUALITY CONTROL

(At the End of Semester-IV)

TeachingHours:2 Hours/Week
MidSem.Exam:0Marks
Sem.end exam:50Marks

Credits:1

1. Assessment of raw materials quality.
2. Quality assessment for processed foods.
3. Sensory evaluation of different food products.
4. Simple tests for analyzing the food quality.
5. Quality evaluation methods for liquid foods.
6. CIP methods and its importance.