

SKILL ENHANCEMENT COURSES

SYLLABUS FOR THE

**SUBJECT: FOOD SCIENCE &
TECHNOLOGY**

for the award of the Degree in

BACHELOR OF ARTS/ BACHELOR OF SCIENCE

(Offered under 3-year UG Degree Programme)

(Credit Based Grading System)

under NEP 2020

Batch: 2025–28



GURU NANAK DEV UNIVERSITY AMRITSAR

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Skill Enhancement Courses in Food Science & Technology
(CBGS) (under NEP 2020) (Batch 2025-28)

SCHEME
SKILL ENHANCEMENT COURSES (SEC)

FOOD SCIENCE & TECHNOLOGY

SEC-I

Sr. No.	Course Code	Course Title	Credits L-T-P	Marks
1.		MUSHROOM CULTIVATION (THEORY)	2- 0- 0	50
2.		MUSHROOM CULTIVATION (PRACTICAL)	0- 0- 1	25

SEC-II

Sr. No.	Course Code	Course Title	Credits L-T-P	Marks
1.		COMPUTER FUNDAMENTALS (THEORY)	2- 0- 0	50
2.		COMPUTER FUNDAMENTALS (PRACTICAL)	0- 0- 1	25

SEC-III

Sr. No.	Course Code	Course Title	Credits L-T-P	Marks
1.		FLORICULTURE (THEORY)	2- 0- 0	50
2.		FLORICULTURE (PRACTICAL)	0- 0- 1	25

FOOD SCIENCE & TECHNOLOGY
SKILL ENHANCEMENT COURSES

(SEC-I)

MUSHROOM CULTIVATION

(THEORY)

Time : 3 Hours

L-T-P
Credits: 2-0-0
Max. Marks: 50

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

Introduction & History of mushroom cultivation;
Biology of mushroom;
Types of mushrooms;
Nutritional value & Medicinal value of mushrooms;
Prospect of mushroom cultivation.

SECTION-B

Cultivation technology: Infrastructure and requirement;
Spawn: types of spawn;
Mushroom bed preparation and factors affecting mushroom bed preparation; Paddy straw mushroom cultivation; Oyster mushroom cultivation;
Rearing conditions and sanitation.

SECTION-C

Harvesting: sanitation during harvesting; process of harvesting
Post harvest processing & Packaging of mushrooms;
Storage; long term and short term storage of mushroom;
Pest and pathogens of mushroom; control measures;

SECTION-D

Marketing of mushroom: market demand; market channels; direct marketing and wholesale marketing;
Value added products / recipes from mushrooms;
Quality assurance of mushrooms.

FOOD SCIENCE & TECHNOLOGY
SKILL ENHANCEMENT COURSES

(SEC-I)

MUSHROOM CULTIVATION

(PRACTICAL)

L-T-P

Credits: 0-0-1

Max. Marks: 25

Practical – Question Paper will be set with the mutual consent of Internal and External Examiners at the spot.

1. Identification of edible and poisonous mushroom.
2. To perform the Bed preparation for mushroom cultivation.
3. Spawn inoculation, storage of culture and maintenance of cultures.
4. Harvesting process.
5. Packaging & Processing of mushroom.

FOOD SCIENCE & TECHNOLOGY
SKILL ENHANCEMENT COURSES

(SEC-II)

COMPUTER FUNDAMENTALS

(THEORY)

Time : 3 Hours

L-T-P

Credits: 2-0-0

Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

Introduction to Computers : Definition and types of computers, Basic components of a computer (hardware and software), Input/Output devices, Operating systems (Windows, MacOS);

Basic Computer Terminology: Files, folders, directories, and drives; The concept of storage: RAM, hard drives, cloud storage; Introduction to file management in Windows;

The Role of Computers in Food Science: Use of computers in research, food processing, and quality control; Introduction to digital tools for food science.

SECTION-B

Microsoft Word: Introduction to MS Word: Overview of the MS Word interface, Creating, saving, and opening documents, Navigation and formatting tools;

Document Formatting: Text formatting: Fonts, size, color, bold, italics, underline; Paragraph formatting: Alignment, line spacing, indentation; Styles and themes for consistent formatting;

Inserting Tables, Images, and Graphs: Inserting and formatting tables; Inserting and resizing images; Creating simple charts and graphs;

References and Citations: Inserting footnotes, endnotes, and bibliographies; Citation styles (APA, MLA) for food science reports;

Review and Collaboration Tools: Track changes, comments, and sharing documents for collaboration.

SECTION-C

Microsoft Excel: Introduction to MS Excel: Overview of the Excel interface, Creating, saving, and opening spreadsheets; Basic functions and formulas (SUM, AVERAGE, COUNT);

Data Entry and Formatting: Entering and editing data in cells; Formatting cells: text, number, date, currency formats; Organizing data with rows, columns, and sheets

Working with Functions and Formulas: Basic mathematical functions: SUM, AVERAGE, MAX, MIN; Logical functions: IF, AND, OR; Lookup functions: VLOOKUP, HLOOKUP; **Data Visualization:** Creating charts: Column, bar, line, pie charts; Customizing chart styles and labels;

Advanced Excel Features: Sorting and filtering data; Conditional formatting, Pivot tables for summarizing data

SECTION-D

Introduction to MS PowerPoint: Overview of the PowerPoint interface, Creating, saving, and opening presentations, Choosing themes and slide layouts.

Creating and Formatting Slides: Adding and editing text boxes, Inserting and formatting images, shapes, and icons Creating and customizing tables and charts ;

Advanced PowerPoint Features: Slide transitions and animations, Inserting multimedia (audio, video), Hyperlinks and action buttons for interactivity;

Presentation Design Principles: Creating visually appealing and easy-to-read slides; Effective use of text and visuals; Tips for audience engagement;

Presentation Skills and Delivery: Preparing notes and rehearsing, Using PowerPoint for live presentations; Best practices for presenting research or projects.

FOOD SCIENCE & TECHNOLOGY
SKILL ENHANCEMENT COURSES
(SEC-II)
COMPUTER FUNDAMENTALS
(PRACTICAL)

L-T-P
Credits: 0-0-1
Max. Marks: 25

Practical – Question Paper will be set with the mutual consent of Internal and External Examiners at the spot.

- 1) Identifying hardware components of a computer
- 2) Basic file management: Creating, saving, renaming, and deleting files
- 3) Practice organizing files and folders relevant to food science projects
- 4) Create a report using MS Word on a food science topic, incorporating tables and images
- 5) Formatting an academic paper with citations and references
- 6) Create a spreadsheet to track food science experiment data
- 7) Use functions and formulas to analyze and summarize data
- 8) Create a chart representing data from a food science students
- 9) Create a PowerPoint presentation for a food science research project or topic
- 10) Design a poster-style presentation on a current food science issue or finding.

**FOOD SCIENCE & TECHNOLOGY
SKILL ENHANCEMENT COURSES**

(SEC-III)

FLORICULTURE

(THEORY)

Time : 3 Hours

**L-T-P
Credits: 2-0-0
Max. Marks: 50**

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION-A

Importance and scope of floriculture;
Classification of flowers: according to their environment and growth habit; tree, shrubs, climbers. Herbs & their uses;
Selection of site and layout

SECTION-B

Nursery establishment, Care & Management of nursery;
Preparation of ornamental plants, Lifting, Potting , repotting & Depotting;
Packaging of ornamental plants

SECTION-C

Cultivation practices of important annuals, seasonal & perennial flowers and foliage plants;
Techniques for making bonsai & container gardens

SECTION-D

Principles and styles of flower arrangement;
Production of flower for Exhibition;
Drying of flowers & Dry flower arrangement;
Preservation & Treatments for seeds, bulbs & cut flowers

FOOD SCIENCE & TECHNOLOGY
SKILL ENHANCEMENT COURSES

(SEC-III)

FLORICULTURE

(PRACTICAL)

L-T-P
Credits: 0-0-1
Max. Marks: 25

Practical – Question Paper will be set with the mutual consent of Internal and External Examiners at the spot.

- 1) Identification of different types of flowers
- 2) Identification of different gardening tools & implements
- 3) Practice of various propagation techniques
- 4) To perform Potting, Depotting and Repotting
- 5) To prepare the Bonsai
- 6) To prepare the container garden
- 7) Drying and preservation of cut flowers