

Programme Objectives: This programme will enable students to acquire knowledge on the in-depth aspects of food science & technology, processing, packaging technology and quality control of process to enable them to understand emerging and advanced concepts in modern technology to help students to create strong linkage with food and dairy industries as well as national and international R&D establishments

Scope: After completion of the course, the students find scope for employments in industries, basic research and academic institute globally, however, following sectors require food science and technology students as professionals:

- Agriculture based products
- Biotechnology
- Beverages & Distillery industries
- Food and Dairy production and packaging sector
- R&D establishments and Academic Institutions
- Hospitality and tourism industry
- Start up, entrepreneur and self-employment

Motivation: The PG Food Science & Technology programme endeavours to be a centre of excellence and acquainted to nationally and internationally in fostering meritorious Food Science & Technologists by entrenching in the areas of academics, research, entrepreneurship and allied activities. The food science & technology programme is committed to provide quality education to the students through progressive academic and research/industrial environment by nurturing scholarly progression, intellectual development and human values.

1. Duration of the programme: 4 semester (2 years)

2. Syllabus:

M.Sc. Food Science and technology Syllabus

| Semester I (First Year) | | | | | |
|---|---|----------|----------|----------|----------|
| Course code | Course name | L | T | P | C |
| **** | Food and Dairy Microbiology | 3 | 1 | 0 | 4 |
| **** | Fermentation Technology | 3 | 1 | 0 | 4 |
| **** | Industrial Food Technology | 2 | 1 | 0 | 3 |
| **** | Seminar and Skill development | 0 | 0 | 0 | 1 |
| **** | Food and Dairy Microbiology Lab | 0 | 0 | 6 | 2 |
| **** | Fermentation Technology Lab | 0 | 0 | 6 | 2 |
| **** | Foreign language (German/French) | 1 | 0 | 0 | 1 |
| Industrial visit (3-5 days) | | | | | |
| Total contact hours= 24, Total credits=17 | | | | | |
| Semester II (First Year) | | | | | |
| **** | Food Chemistry and Nutrition | 3 | 1 | 0 | 4 |
| **** | Analytical Techniques of Food Technology | 3 | 1 | 0 | 4 |
| **** | Functional Foods and Nutraceuticals | 3 | 1 | 0 | 4 |
| **** | Research Methodology and Technical Writing | 2 | 1 | 0 | 3 |
| **** | Food Chemistry and Nutrition Lab | 0 | 0 | 6 | 2 |
| **** | Analytical Techniques of Food Analysis Lab | 0 | 0 | 6 | 2 |
| **** | Open elective/MOOC | 1 | 0 | 0 | 1 |
| **** | Bioinformatics and Biostatistics | 1 | 0 | 0 | 1 |
| **** | Industrial Internship (2 months) | 1 | 0 | 0 | 1 |
| Total contact hours = 30, Total credits = 22 | | | | | |
| Semester III (Second Year) | | | | | |
| **** | Food Processing and Preservation Technology | 3 | 1 | 0 | 4 |
| **** | Natural Food Additives (Flavors, Enzymes and Colorants) | 3 | 1 | 0 | 4 |
| **** | Food packaging and supply chain | 3 | 1 | 0 | 4 |

| | | | | | |
|--|--------------------------------------|---|---|---|----|
| **** | Food Processing and Preservation Lab | 0 | 0 | 6 | 2 |
| **** | Natural Food Additives Lab | 0 | 0 | 6 | 2 |
| **** | Food packaging and supply chain Lab | 0 | 0 | 3 | 1 |
| **** | DSE-I | 3 | 1 | 0 | 4 |
| **** | DST-II | 2 | 1 | 0 | 4 |
| Total contact hours= 33, Total credits=25 | | | | | |
| Semester IV (Second Year) | | | | | |
| **** | Dissertation/Project work | - | - | - | 16 |
| Total credits=16 | | | | | |

Discipline specific electives courses (DSE)

DSE-I

- Biosafety and Intellectual property rights (IPR)
- Bioprocessing and food packaging
- Food regulatory affairs

DSE-II

- Cold Chain Management
- Industrial Safety & Hazards
- Food testing and analysis

Books

- Objective Food Science - 12th Revised Edition, 2023 by Harshad Kiran Kalwit Sanjeev Kumar Sharma.
- Textbook of Food Science and Technology, 3rd Edition by Sharma A
- Objective Food Science & Technology 3rd Edition Deepak Mudgil and Sheweta Barak Mudgil
- Food Science 5th Ed (Pb 2007) by Potter
- Basic Food Science & Technology by S. M. Reddy
- Text book of Food Science and Technology by Moumita Paul Chowdhury and Syeda Uzma Nabeela
- Food Science and Technology by Geoffrey Campbell-Platt
- Modern Food Microbiology (Food Science Text Series) by David A. Golden

List of Journals related to course:

- Journal of Food Science and Technology, Springer
- Food Science & Technology - Taylor & Francis
- International Journal of Food Science & Technology, John Wiley & Sons, Inc
- Food Science & Technology (FS&T), John Wiley & Sons, Inc
- Trends in Food Science & Technology, Elsevier Ltd.