

# **CURRICULUM & SYLLABUS**



**Bachelor of Science Food Technology**

**or**

**Bachelor of Science Food Technology (Hons.)/ (Hons. with Research)/**

**Academic Projects**

**(A 4 Year Graduate Programme)**

**Under UGC Framework- 2022 based on NEP- 2020**

**[w. e. f. Academic Year: 2023-2024]**

**Department of Food Technology**

**Faculty of Science & Humanities**

**SRM University, Delhi-NCR, Sonapat, Haryana-  
131029, India**

# **SRM UNIVERSITY DELHI-NCR, SONEPAT (HARYANA)**

## **VISION**

SRM University Haryana aims to emerge as a leading World Class Institution that creates and disseminates knowledge upholding the highest standards of instruction in Engineering & Technology, Science & Humanities, Commerce, Management, Hotel Management & Medicine & Health Science. Along with academic excellence, our curriculum imparts integrity and social sensitivity so that our graduates may best serve the Nation and the World.

## **MISSION**

- To create a diverse community campus that inspires freedom and innovation.
- Strengthen Excellence in educational & skill development processes
- Continue to build productive international alliances
- Explore optimal development opportunities available to students and faculty
- Cultivate an exciting and rigorous research environment

# **DEPARTMENT OF FOOD TECHNOLOGY**

## **VISION**

The Department of Food Technology offers a modern and comprehensive skill-based curriculum under National Educational Policy (NEP) 2020. Under NEP 2020, Department aim to develop good, thoughtful, well-rounded, and creative individuals. To prepare students for professional as well as private life. To not only train them with the core components but also in areas that are need-based, innovative and relevant keeping in pace with the dynamics of the growing food industry. The department is focused to contribute to scholastic and experimental knowledge through sheer dedication and excellence to prepare future academicians, nutritionists, scientists, and entrepreneurs.

## **MISSION**

- To demonstrate thorough knowledge and understanding of the food technology curriculum.
- To apply the principles of food science to preserve, process and package to assure the quality and safety of food products.
- To understand that the real-world problems in the food industry through the consecutive acquisition of knowledge and its application to improve the safety and quality of a given food or process.
- To bridge the gap between industry and academia by imparting technical/experimental knowledge, along with its application in the practical world.
- To acquaint students with knowledge and skills, including “learning how to learn”, necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, and adapting to changing trades and demands of the workplace through knowledge/skill development/reskilling.
- To provide professional competency and entrepreneurial skills for economic empowerment.
- To encourage innovation through multidisciplinary research and development activities.
- To inculcate human values and ethics into students to serve the society and nation, in all possible ways.

## FOOD TECHNOLOGY GRADUATE EMPLOYABILITY ATTRIBUTES

- **Communication Skills:** Enhancing verbal and written communication abilities to effectively convey technical information to diverse stakeholders, including team members, supervisors, and customers.
- **Teamwork and Collaboration:** Fostering teamwork and collaboration through group projects, discussions, and interdisciplinary activities, which are crucial for success in the food industry's dynamic work environment.
- **Critical Thinking and Problem-Solving:** Encouraging students to identify and analyze complex food-related problems, apply scientific methods, and develop innovative solutions.
- **Leadership and Management:** Providing opportunities for students to develop leadership qualities and project management skills to take on leadership roles in the food sector.
- **Practical Skills:** Hands-on training in food processing techniques, equipment operation, and laboratory analysis to develop technical proficiency and practical competence.
- **Technical Knowledge:** A solid foundation in food science, food processing, food safety, quality control, and preservation methods is essential for graduates to excel in the industry.
- **Entrepreneurial Thinking:** Encouraging students to think innovatively, identify entrepreneurial opportunities, and foster a spirit of entrepreneurship to contribute to economic development.
- **Industrial Exposure:** Providing opportunities for internships, industrial visits, and collaborations with food companies to gain real-world experience and exposure to industry practices.
- **Ethical Awareness:** Cultivating an understanding of ethical and societal responsibilities related to food technology, sustainability, and social impact.
- **Food Regulations and Compliance:** Familiarizing students with relevant food safety regulations and quality assurance standards applicable to the food industry.
- **Research and Development:** Introducing students to research methodologies and encouraging participation in food-related research projects to promote innovation in the field.

## **PROGRAM EDUCATIONAL OBJECTIVES (PEOs)**

B.Sc. Food Technology is a four-year undergraduate program with specialization in food sciences. The program fosters interdisciplinary approach to not only train them with the core components, but also in areas that are need-based, innovative and relevant keeping in pace with the dynamics of the growing food industry.

The program educational objectives of the course are:

**PEO 1: Technical Competence** - Demonstrate a strong foundation in food science and technology, including knowledge of food processing, preservation, safety, and quality control, enabling them to contribute effectively to the food industry.

**PEO 2: Problem-Solving Skills** - Analytical and critical thinking abilities to identify and solve complex problems related to food production, processing, and innovation, fostering innovation and continuous improvement in the food sector.

**PEO 3: Professional Development** - Develop communication, leadership, and teamwork skills, as well as an understanding of ethical and societal responsibilities, to excel in multidisciplinary teams and take on leadership roles in the food industry.

**PEO 4: Adaptability** - Adapt to changing technologies, market demands, and global trends in food technology, allowing them to sustainably address challenges in food production, processing, and distribution.

**PEO 5: Lifelong Learning** - Ability and motivation to engage in lifelong learning, staying abreast of emerging trends and developments in food technology, and pursuing higher studies or professional certifications as necessary.

**PEO 6: Entrepreneurship** - Knowledge and skills to identify entrepreneurial opportunities in the food sector, enabling them to establish their food-related ventures and contribute to economic development.

## **PROGRAM LEARNING OUTCOMES (PLOs):**

At the end of the program in B.Sc. (Hons./ Hons. with Research) Food Technology, a student is expected to exhibit the under mentioned:

**PLO 1: Knowledge Base** - Demonstrate comprehensive knowledge and understanding of food science, food processing techniques, food safety regulations, and the principles of food quality assurance.

**PLO 2: Technical Proficiency** - Apply practical skills in food processing, preservation, and analysis, utilizing modern technologies and equipment commonly used in the food industry.

**PLO 3: Problem-Solving** - Identify, analyze, and solve food-related problems using scientific methods and critical thinking skills, considering factors such as food safety, quality, and sustainability.

**PLO 4: Communication** - Effectively communicate food-related information to various stakeholders, both orally and in writing, with clarity and coherence.

**PLO 5: Teamwork** - Collaborate and work efficiently in interdisciplinary teams, demonstrating leadership qualities, effective communication, and the ability to adapt to diverse perspectives.

**PLO 6: Ethical and Professional Responsibility** - Recognize the ethical and societal implications of food technology, adhere to professional codes of conduct, and consider the environmental and social impact of food-related practices.

**PLO 7: Lifelong Learning** - Engage in continuous learning by staying updated with emerging food technologies and industry trends. Innovative approach towards any future opportunities, or endeavors.

These Program Education Objectives and Program Learning Outcomes will serve as guiding principles for the B.Sc (Hons./ Hons. with Research) Food Technology Programme, ensuring that graduates are well-prepared to address the challenges and contribute effectively to the food industry.

**MAPPING MATRIX OF PEOs & PLOs**

<div>PEOs</div> <div>PLOs</div>	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
PEO 1							
PEO 2							
PEO 3							
PEO 4							
PEO 5							
PEO 6							

**Four Year B.Sc. Food Technology Programme Structure in alignment with  
NEP-**

**2020 in the Department of Food Technology, SRMUH**

**w.e.f. Academic Year 2023-24**

<b>S. No.</b>	<b>Broad Category of Courses</b>	<b>No. of Courses</b>	<b>Credits</b>	<b>%</b>
1	Major Course (Discipline Specific Course DSC)	24	$24 \times 4 = 96$	52.8
2	Interdisciplinary Course (IDC) / Minor Stream Course (MSC)	7	$7 \times 4 = 28$ $3 \times 4 = 12^*$	15.4
3	Multi-Disciplinary Course (MDC)	3	$3 \times 3 = 9$	5
4	Ability Enhancement course (AEC)	4	$2 \times 2 = 4$ $2 \times 2 = 4$	5.5
5	Skill Enhancement Course (SEC)	10	$10 \times 1 = 10$	5.5
6	Value Added Course (VAC)	3	$3 \times 2 = 6$	3.3
7	Project / Dissertation	3	$1 \times 2 + 1 \times 4 = 6 + 1 \times 6 = 12^\#$	6.6
8	Live Projects/Vocational Courses/Summer Internship	3	$3 \times 4 = 12$	6.6
<b>Total</b>		<b>56</b>	<b>181</b>	<b>100</b>



**Four Year B.Sc. Food Technology Programme Structure component-wise  
distribution in alignment with NEP-2020 in the Department of Food  
Technology,  
SRMUH w.e.f. Academic Year 2023-24.**

S. No.	Courses types	No. of Courses	Component	Credits	Total Credits	%
1	Major Course	24	Theory	$24 \times 3 = 72$	96	52.5
			Practical	$24 \times 1 = 24$		
2	Interdisciplinary Course (IDC) / Minor Stream Course (MSC)	7	Theory	$7 \times 4 = 28$	28	15.3
3	Multi-Disciplinary Course (MDC)	3	Theory	$3 \times 3 = 9$	9	5
4	Ability Enhancement course (AEC)	4	Theory	$2 \times 2 = 4$ $2 \times 2 = 4$	8	5.5
5	Skill Enhancement Course (SEC)	10	Soft SEC Practical	$5 \times 1 = 5$	10	5.5
			Tech. SEC Practical	$5 \times 1 = 5$		
6	Value Added Course (VAC)	3	Theory	$2 \times 2 = 4$	6	3.3
			Practical	$2 \times 1 = 2$		
7	Project / Dissertation	3*	Theory*	$3 \times 4 = 12^*$	12	6.6
		3#	Theory#	$2 \times 1 = 2$		
			Practical#	$1 \times 4 = 4$ $1 \times 6 = 6$		
8	Live Projects/Vocational Courses/Summer Internship	3	Practical	$3 \times 4 = 12$	12	6.6
<b>Total</b>		56	Theory	$115=63.2\%$	181	100
			Practical	$43=23.6\%$		
			Project	$24=13.2\%$		

**\*Students pursuing Honours will do 4 courses for 12 Credit in lieu of a Research Project/Dissertation.**

**#Students pursuing Honours with Research would complete 12 Credits of Research/Dissertation.**

Semester	Broad Category of Courses								Total Credits	Remarks
	Major	Minor	Multidisciplinary	AEC	SEC	VAC	RP/Dissertation	Live Projects/Vocational Courses/Summer Internship		
I	8	4	3	2	2	2	-	-	21	Certificate: 46 Credits
II	8	4	3	2	2	2	-	4	25	
III	12	4	3	2	2	-	-	-	23	Diploma: 95 Credits
IV	12	4	-	2	2	2	-	4	26	
V	16	4	-	-	2	-	-	-	22	Degree: 145 Credits
VI	16	8	-	-	-	-	-	4	28	
VII	12	6*	-	-	-	-	6#	-	18	Honours / Honours with Research: 181 Credits
VIII	12	6*	-	-	-	-	6#	-	18	
3 Years	72	28	9	8	10	6	0	12	145	
%	49.65	19.31	6.21	5.52	6.89	4.14	0.00	8.28	100.00	
4 Years	96	28	9	8	10	6	12	12	181	
%	53.04	15.30	4.92	4.42	5.52	3.31	6.63	6.63	100.00	

\*Students pursuing Honours will do 4 courses for 12 Credit in lieu of a Research Project/Dissertation.

#Students pursuing Honours with Research would complete 12 Credits of Research/Dissertation.

## **COURSE REVISION DETAILS**

1. Implementation of four year B.Sc. Food Technology programme as per NEP 2020: The course structure and syllabus are revised from three year B.Sc. (H) Food Technology programme to four year B.Sc. (Hons.) Food Technology / B.Sc. (Hons.) Food Technology with Research or Academic Project programme following the UGC frame work 2022 based on NEP 2020. This four year under graduate Food Technology programme with be effective from the academic year 2023-24.
2. Course Objectives and Course Learning Outcomes are made more specific for all courses.

## B.Sc. Food Technology

### Semester-I

CODE	CATEGORY	COURSE	L	T	P	C
23FTBS101	Major Course	Introduction to Food Science	3	0	0	3
23FTBS151	Major Course	Introduction to Food Science Lab	0	0	2	1
23FTBS102	Major Course	Fundamentals of Food Technology	3	0	0	3
23FTBS152	Major Course	Fundamentals of Food Technology Lab	0	0	2	1
	IDC/Minor Stream Course	IDC/MSC 1	3	1	0	4
	Multi Disciplinary Course	MDC 1	3	0	0	3
	Ability Enhancement Course	Functional English-1	2	0	0	2
	Technical Skill Enhancement Course	Digital Literacy & IT Skills	0	0	2	1
	Soft Skill Enhancement Course	Effective Communication Skills	0	0	2	1
	Value Added Course	Indian Constitution & Polity	2	0	0	2
<b>Total</b>			<b>17</b>	<b>1</b>	<b>8</b>	<b>21</b>

L-Lecture, T-Tutorial, P-Practical, C-Credits

## B.Sc. Food Technology

### Semester-II

CODE	CATEGORY	COURSE	L	T	P	C
23FTBS201	Major Course	Basic Nutrition	3	0	0	3
23FTBS251	Major Course	Basic Nutrition Lab	0	0	2	1
23FTBS202	Major Course	Food Preservation Technology	3	0	0	3
23FTBS252	Major Course	Food Preservation Technology Lab	0	0	2	1
	IDC/Minor Stream Course	IDC/MSC 2	3	1	0	4
	Multi Disciplinary Course	MDC 2	3	0	0	3
	Ability Enhancement Course	Functional English-2	2	0	0	2
	Technical Skill Enhancement Course	Advanced Excel Skills	0	0	2	1
	Soft Skill Enhancement Course	Team Work & Interpersonal Skills	0	0	2	1
	Value Added Course	Environmental Protection & Sustainable Development	2	0	0	2
23FTBS271	Live Projects/Vocational Courses/Summer Internship	Live Projects/Vocational Courses/Summer Internship				4
<b>Total</b>			<b>17</b>	<b>1</b>	<b>8</b>	<b>25</b>

L: Lecture; T: Tutorial; P: Practical; C: Credits

On Exit, students shall be awarded UG Certificate (Food Technology) on securing the requisite 46 Credits on completion of II-Semester.

## B.Sc. Food Technology

### Semester-III

CODE	CATEGORY	COURSE	L	T	P	C
23FTBS301	Major Course	Emerging Technology in Food Processing	3	0	0	3
23FTBS351	Major Course	Emerging Technology in Food Processing Lab	0	0	2	1
23FTBS302	Major Course	Technology of Fruits and Vegetables	3	0	0	3
23FTBS352	Major Course	Technology of Fruits and Vegetables Lab	0	0	2	1
23FTBS303	Major Course	Dairy Technology	3	0	0	3
23FTBS353	Major Course	Dairy Technology Lab	0	0	2	1
	IDC/Minor Stream Course	IDC/MS C 3	3	1	0	4
	Multi Disciplinary Course	MDC 3	3	0	0	3
	Ability Enhancement Course	Hindi-I/French-I /German-I	2	0	0	2
	Technical Skill Enhancement Courses	Statistical Analysis with SPSS	0	0	2	1
	Soft Skill Enhancement Courses	Presentation Skills	0	0	2	1
<b>Total</b>			<b>18</b>	<b>1</b>	<b>12</b>	<b>23</b>

L: Lecture; T: Tutorial; P: Practical; C: Credits

## B.Sc. Food Technology

### Semester-IV

CODE	CATEGORY	COURSE	L	T	P	C
23FTBS401	Major Course	Food Microbiology	3	0	0	3
23FTBS451	Major Course	Food Microbiology Lab	0	0	2	1
23FTBS402	Major Course	Technology of Cereals, Pulses and Oilseeds	3	0	0	3
23FTBS452	Major Course	Technology of Cereals, Pulses and Oilseeds Lab	0	0	2	1
23FTBS403	Major Course	Meat, Poultry and Egg Technology	3	0	0	3
23FTBS453	Major Course	Meat, Poultry and Egg Technology Lab	0	0	2	1
	IDC/Minor Stream Course	IDC/MSC 4	3	1	0	4
	Technical Skill Enhancement Courses	R Language Programming	0	0	2	1
	Soft Skill Enhancement Courses	Professional Writing Skills	0	0	2	1
	Value Added Courses	Sports, Yoga & Fitness	0	0	4	2
	Ability Enhancement Course	Hindi-II/French-II/German-II	2	0	0	2
23FTBS471	Live Projects/Vocational Courses/Summer Internship	Live Projects/Vocational Courses/Summer Internship				4
<b>Total</b>			<b>12</b>	<b>0</b>	<b>16</b>	<b>26</b>

L: Lecture; T: Tutorial; P: Practical; C: Credits

On Exit, students shall be awarded UG Diploma (Food Technology) on securing the requisite 95 Credits on completion of IV-Semester.

## B.Sc. Food Technology

### Semester-V

CODE	CATEGORY	COURSE	L	T	P	C
23FTBS501	Major Course	Unit Operation in Food Processing	3	0	0	3
23FTBS551	Major Course	Unit Operation in Food Processing Lab	0	0	2	1
23FTBS502	Major Course	Food Chemistry-I	3	0	0	3
23FTBS552	Major Course	Food Chemistry-I Lab	0	0	2	1
23FTBS503	Major Course	Spices and Plantation Crops Process Technology	3	0	0	3
23FTBS553	Major Course	Spices and Plantation Crops Process Technology Lab	0	0	2	1
23FTBS504	Major Course	Food Packaging	3	0	0	3
23FTBS554	Major Course	Food Packaging Lab	0	0	2	1
	Minor Stream Course	MSC 5	3	1	0	4
	Technical Skill Enhancement Courses	Programming with MATLAB	0	0	2	1
	Soft Skill Enhancement Courses	Aptitude & Reasoning	0	0	2	1
<b>Total</b>			<b>15</b>	<b>1</b>	<b>12</b>	<b>22</b>

L: Lecture; T: Tutorial; P: Practical; C: Credits



## B.Sc. Food Technology

### Semester-VI

CODE	CATEGORY	COURSE	L	T	P	C
23FTBS601	Major Course	Food Chemistry-II	3	0	0	3
23FTBS651	Major Course	Food Chemistry-II Lab	0	0	2	1
23FTBS602	Major Course	Fundamentals of Sensory Evaluation	3	0	0	3
23FTBS652	Major Course	Fundamentals of Sensory Evaluation Lab	0	0	2	1
23FTBS603	Major Course	Bakery & Confectionary Technology	3	0	0	3
23FTBS653	Major Course	Bakery & Confectionary Technology Lab	0	0	2	1
23FTBS604	Major Course	Food Fermentation Technology	3	0	0	3
23FTBS654	Major Course	Food Fermentation Technology Lab	0	0	2	1
	Minor Stream Course	MSC 6	3	1	0	4
	Minor Stream Course	MSC 7	3	1	0	4
23FTBS671	Summer Internship	Live Project/ Vocational Courses/ Summer Internship				4
<b>Total</b>			<b>18</b>	<b>2</b>	<b>8</b>	<b>28</b>

L: Lecture; T: Tutorial; P: Practical; C: Credits

On Exit, students shall be awarded UG Degree (Food Technology) on securing the requisite 145 Credits on completion of VI-Semester.

## B.Sc. Food Technology

### Semester-VII

CODE	CATEGORY	COURSE	L	T	P	C
23FTBS701	Major Course	Food Engineering	3	1	0	4
23FTBS702	Major Course	Nutraceutical and Functional Food	3	1	0	4
23FTBS703	Major Course	Flavour Technology	3	1	0	4
	Minor Stream Course*	MSC 8*	3	1	0	4
	Minor Stream Course*	MSC 9*	2	0	0	2
	Major/Minor Course for RP#	Research Methodology#	2	0	0	2
23FTBS771	Research Project/ Dissertation for RP#	Dissertation				4
<b>Total</b>			<b>16</b>	<b>4</b>	<b>0</b>	<b>18</b>

L: Lecture; T: Tutorial; P: Practical; C: Credits

\* Students pursuing Honours will do 1 Courses of 4 Credits and 1 course of 2 credits in lieu of Research Project in 7th Semester

# Students pursuing Honours with Research will do Research Methodology of 2 Credit and Research Project/Dissertation of 4 Credits.

## B.Sc. Food Technology

### Semester-VIII

CODE	CATEGORY	COURSE	L	T	P	C
23FTBS801	Major Course	Food Additive	3	1	0	4
23FTBS802	Major Course	Food Toxicology	3	1	0	4
23FTBS803	Major Course	Food Safety and Quality	3	1	0	4
	Minor Stream Course*	MSC 10*	2	0	0	2
23FTBS871	Minor Project*	Minor Project*				4
23FTBS872	Research Project/Dissertation#	Major Project/Major Dissertation#				6
<b>Total</b>			<b>11</b>	<b>3</b>	<b>0</b>	<b>18</b>

L: Lecture; T: Tutorial; P: Practical; C: Credits

\* Students pursuing Honours will do 1 Course of 2 Credits and Minor Project of 4 credits in lieu of Research Project in VIII Semester

#Students pursuing Honours with Research will do Research Project/Dissertation of 6 Credits

On Exit, students shall be awarded B.Sc. (Food Technology) (Honours with Research) or (Honours) after securing the requisite 183 Credits on completion of VIII-Semester.

## THE ASSESSMENT & EVALUATION OF CONTINUOUS AND END SEMESTER MARKS

Examination, Assessment & Evaluation System NEP-2020			
Course Type	Examination	Evaluation Details	
		Continuous	End Semester
Major Courses	Theory	40	60
	Practical	60	40
Minor Courses	Theory	40	60
	Practical	60	40
Multidiscipline Courses	Theory	40	60
	Practical	60	40
SEC	Practical	70	30
VAC	VAC	70	30
	Sports, Yoga & Fitness	80	20
Live Projects/Vocational Courses /Summer Internship	Practical	60	40
Research Project/Dissertation	Practical	70	30

**List of Major Courses (MC) offered to**  
**Four Year B.Sc. Food Technology Programme in the Department of Food Technology w.e.f.**  
**Academic Year 2023-24**

S. No.	SEM	CODE	COURSE	L	T	P	C
1	I	23FTBS101	Introduction to Food Science	3	0	0	3
2	I	23FTBS151	Introduction to Food Science Lab	0	0	2	1
3	I	23FTBS102	Fundamentals of Food Technology	3	0	0	3
4	I	23FTBS152	Fundamentals of Food Technology Lab	0	0	2	1
5	II	23FTBS201	Basic Nutrition	3	0	0	3
6	II	23FTBS251	Basic Nutrition Lab	0	0	2	1
7	II	23FTBS202	Food Preservation Technology	3	0	0	3
8	II	23FTBS252	Food Preservation Technology Lab	0	0	2	1
9	III	23FTBS301	Emerging Technology in Food Processing	3	0	0	3
10	III	23FTBS351	Emerging Technology in Food Processing Lab	0	0	2	1
11	III	23FTBS302	Technology of Fruits and Vegetables	3	0	0	3
12	III	23FTBS352	Technology of Fruits and Vegetables Lab	0	0	2	1
13	III	23FTBS303	Dairy Technology	3	0	0	3

14	III	23FTBS353	Dairy Technology Lab	0	0	2	1
15	IV	23FTBS401	Food Microbiology	3	0	0	3
16	IV	23FTBS451	Food Microbiology Lab	0	0	2	1
17	IV	23FTBS402	Technology of Cereals, Pulses and Oilseeds	3	0	0	3
18	IV	23FTBS452	Technology of Cereals, Pulses and Oilseeds Lab	0	0	2	1
19	IV	23FTBS403	Meat, Poultry and Egg Technology	3	0	0	3
20	IV	23FTBS453	Meat, Poultry and Egg Technology Lab	0	0	2	1
21	V	23FTBS501	Unit Operation in Food Processing	3	0	0	3
22	V	23FTBS551	Unit Operation in Food Processing Lab	0	0	2	1
23	V	23FTBS502	Food Chemistry-I	3	0	0	3
24	V	23FTBS552	Food Chemistry-I Lab	0	0	2	1
25	V	23FTBS503	Spices and Plantation Crops Process Technology	3	0	0	3
26	V	23FTBS553	Spices and Plantation Crops Process Technology Lab	0	0	2	1
27	V	23FTBS504	Food Packaging	3	0	0	3

28	V	23FTBS554	Food Packaging Lab	0	0	2	1
29	VI	23FTBS601	Food Chemistry-II	3	0	0	3
30	VI	23FTBS651	Food Chemistry-II Lab	0	0	2	1
31	VI	23FTBS602	Fundamentals of Sensory Evaluation	3	0	0	3
32	VI	23FTBS652	Fundamentals of Sensory Evaluation Lab	0	0	2	1
33	VI	23FTBS603	Bakery & Confectionary Technology	3	0	0	3
34	VI	23FTBS653	Bakery & Confectionary Technology Lab	0	0	2	1
35	VI	23FTBS604	Food Fermentation Technology	3	0	0	3
36	VI	23FTBS654	Food Fermentation Technology Lab	0	0	2	1
37	VII	23FTBS701	Food Engineering	3	1	0	4
38	VII	23FTBS702	Nutraceutical and Functional Food	3	1	0	4
39	VII	23FTBS703	Flavour Technology	3	1	0	4
40	VIII	23FTBS801	Food Additive	3	1	0	4

41	VIII	23FTBS802	Food Toxicology	3	1	0	4
42	VIII	23FTBS803	Food Safety and Quality	3	1	0	4



**List of Inter Disciplinary Courses (IDC)/ Minor Stream Courses (MSC) offered to  
Four Year B.Sc. Food Technology Programme in the Department of Food Technology w.e.f.  
Academic Year 2023-24**

S. No.	Cat.	CODE	COURSE	L	T	P	C
1	IDC		Introduction to Algebra	3	1	0	4
2			Differential Calculus	3	1	0	4
3			Differential Equations	3	1	0	4
4			Statistical Methods and Probability	3	1	0	4
5			Physical Chemistry-I	3	1	0	4
6			Physical Chemistry-II	3	1	0	4
7			Inorganic Chemistry	3	1	0	4
8			Analytical Chemistry	3	1	0	4
1	MSC	23FTBS001	Principles of Food Processing	3	1	0	4
2		23FTBS002	Clinical Nutrition	3	1	0	4
3		23FTBS003	Community Nutrition	3	1	0	4
4		23FTBS004	Food Product Development	3	1	0	4
5		23FTBS005	Food Analysis & Instrumentation	3	1	0	4
6		23FTBS006	Food Supply Chain Management	3	1	0	4
7		23FTBS007	Food Biotechnology	3	1	0	4

8	MSC	23FTBS008	Beverage Technology	3	1	0	4
9		23FTBS009	Agri Business Management	2	0	0	2
10		23FTBS0010	Waste Management & By Product Utilization	2	0	0	2
11		23FTBS0011	Post Harvest Technology	3	1	0	4

**List of Multidisciplinary Courses (MDC) offered to  
Four Year B.Sc. Food Technology Programme in the Department of Food Technology w.e.f.  
Academic Year 2023-24**

S. No.	Category	Course Name	Credits
1	MDC I	Renewable Energy Source	3
2		Hybrid Electric Vehicle	3
3		IPR in Business	3
4		Library Information Science & Media Literacy	3
5		Management Process & Organizational Behaviour	3
6	MDC II	Introduction to Bio-engineering	3
7		Introduction to Robotics	3
8		Psychology and Emotional Intelligence	3
9		Indian Economy	3
10		Creating and Entrepreneurial Mind	3
11	MDC III	Arduino based Programming	3
12		Electoral Literacy in India	3
13		Personal Financial Planning	3
14		Interior Decoration	3

**List of Ability Enhancement Courses (AEC) offered to  
Four Year B.Sc. Food Technology Programme in the Department of Food Technology w.e.f.  
Academic Year 2023-24**

S. No.	Code	Course Name	L	T	P	C
1		Functional English-I	2	0	0	2
2		Functional English-II	2	0	0	2
3		Hindi-I/ German-I/ French-I	2	0	0	2
4		Hindi-II/ German-II/ French-II	2	0	0	2

**List of Value Added Courses (VAC) offered to  
Four Year B.Sc. Food Technology Programme in the Department of Food Technology w.e.f.  
Academic Year 2023-24**

<b>S. No.</b>	<b>Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	23VACXXX	Indian Constitution & Polity	2	0	0	2
2	23VAC101/23VAC201	Environment Protection & Sustainable Development	2	0	0	2
3	23VACXXX	Sports, Yoga & Fitness	0	0	4	2

**List of Skill Enhancement Courses (SEC) offered to  
Four Year B.Sc. Food Technology Programme in the Department of Food Technology w.e.f.  
Academic Year 2023-24**

**Courses on Soft Skills**

<b>S. No.</b>	<b>Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	23SS151	Effective Communication Skills	0	0	2	1
2	23SS252	Teamwork & Interpersonal Skills	0	0	2	1
3	23SS353	Presentation Skills	0	0	2	1
4	23SS454	Professional Skills	0	0	2	1
5	23AR555	Aptitude & Reasoning	0	0	2	1

**Courses on Technical Skills**

<b>S. No.</b>	<b>Code</b>	<b>Course Name</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	23SS101	Digital Literacy & IT Skills	0	0	2	1
2	23SS202	Advanced Excel Skills	0	0	2	1
3	23SS303	Statistical Analysis with SPSS	0	0	2	1
4	23SS404	R Language Programming	0	0	2	1
5	23SS505	Programming with MATLAB	0	0	2	1

**List of Major Courses (MC) offered to**  
**Four Year B.Sc. Food Technology Programme in the Department of Food Technology w.e.f.**  
**Academic Year 2023-24**

S. No.	SEM	CODE	COURSE	L	T	P	C
1	I	23FTBS101	Introduction to Food Science	3	0	0	3
2	I	23FTBS151	Introduction to Food Science Lab	0	0	2	1
3	I	23FTBS102	Fundamentals of Food Technology	3	0	0	3
4	I	23FTBS152	Fundamentals of Food Technology Lab	0	0	2	1
5	II	23FTBS201	Basic Nutrition	3	0	0	3
6	II	23FTBS251	Basic Nutrition Lab	0	0	2	1
7	II	23FTBS202	Food Preservation Technology	3	0	0	3
8	II	23FTBS252	Food Preservation Technology Lab	0	0	2	1
9	III	23FTBS301	Emerging Technology in Food Processing	3	0	0	3
10	III	23FTBS351	Emerging Technology in Food Processing Lab	0	0	2	1
11	III	23FTBS302	Technology of Fruits and Vegetables	3	0	0	3
12	III	23FTBS352	Technology of Fruits and Vegetables Lab	0	0	2	1
13	III	23FTBS303	Dairy Technology	3	0	0	3
14	III	23FTBS353	Dairy Technology Lab	0	0	2	1

15	IV	23FTBS401	Food Microbiology	3	0	0	3
16	IV	23FTBS451	Food Microbiology Lab	0	0	2	1
17	IV	23FTBS402	Technology of Cereals, Pulses and Oilseeds	3	0	0	3
18	IV	23FTBS452	Technology of Cereals, Pulses and Oilseeds Lab	0	0	2	1
19	IV	23FTBS403	Meat, Poultry and Egg Technology	3	0	0	3
20	IV	23FTBS453	Meat, Poultry and Egg Technology Lab	0	0	2	1
21	V	23FTBS501	Unit Operation in Food Processing	3	0	0	3
22	V	23FTBS551	Unit Operation in Food Processing Lab	0	0	2	1
23	V	23FTBS502	Food Chemistry-I	3	0	0	3
24	V	23FTBS552	Food Chemistry-I Lab	0	0	2	1
25	V	23FTBS503	Spices and Plantation Crops Process Technology	3	0	0	3
26	V	23FTBS553	Spices and Plantation Crops Process Technology Lab	0	0	2	1
27	V	23FTBS504	Food Packaging	3	0	0	3
28	V	23FTBS554	Food Packaging Lab	0	0	2	1



29	VI	23FTBS601	Food Chemistry-II	3	0	0	3
30	VI	23FTBS651	Food Chemistry-II Lab	0	0	2	1
31	VI	23FTBS602	Fundamentals of Sensory Evaluation	3	0	0	3
32	VI	23FTBS652	Fundamentals of Sensory Evaluation Lab	0	0	2	1
33	VI	23FTBS603	Bakery & Confectionary Technology	3	0	0	3
34	VI	23FTBS653	Bakery & Confectionary Technology Lab	0	0	2	1
35	VI	23FTBS604	Food Fermentation Technology	3	0	0	3
36	VI	23FTBS654	Food Fermentation Technology Lab	0	0	2	1
37	VII	23FTBS701	Food Engineering	3	1	0	4
38	VII	23FTBS702	Nutraceutical and Functional Food	3	1	0	4
39	VII	23FTBS703	Flavour Technology	3	1	0	4
40	VIII	23FTBS801	Food Additive	3	1	0	4
41	VIII	23FTBS802	Food Toxicology	3	1	0	4

42	VIII	23FTBS803	Food Safety and Quality	3	1	0	4
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