

ACADEMIC CURRICULA

POST GRADUATE DEGREE PROGRAMMES

Master of Technology

(Choice Based Flexible Credit System)

Regulations 2021

Volume – 21 Curriculum



SRM

INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

(Deemed to be University u/s 3 of UGC Act, 1956)

Kattankulathur, Chengalpattu District 603203,

Tamil Nadu, India

35 M.Tech in Food and Nutritional Biotechnology

35. (a) Department Vision Statement

Stmnt - 1	<i>To enrich knowledge in emerging technologies in food and nutritional sector.</i>
Stmnt - 2	<i>To create professionally qualified technocrats in food technology sector</i>
Stmnt - 3	<i>To motivate students to become food entrepreneurs with technological skills</i>

35. (b) Department Mission Statement

Stmnt - 1	<i>To enrich knowledge in advance sectors of food, nutritional and food processing operations</i>
Stmnt - 2	<i>To focus on thrust areas of research in food and nutritional biotechnology.</i>
Stmnt - 3	<i>To adopt and apply high standards of technology for developing innovative food products and processes.</i>
Stmnt - 4	<i>To enhance professional ethics and moral in developing novel products.</i>
Stmnt - 5	<i>To create employability skills to meet the upcoming food technology sector.</i>

35. (c) Program Education Objectives (PEO)

PEO - 1	<i>To educate and enrich knowledge on process operation involved in food manufacturing.</i>
PEO - 2	<i>To provide opportunity to study job oriented courses like FSMS, FoSTAC courses during their study.</i>
PEO - 3	<i>To study latest developments in processing, application and technological innovations in food sector.</i>
PEO - 4	<i>To motive the students to carry out research studies in modern food processing sector</i>
PEO - 5	<i>To create knowledge and skill set to become food entrepreneur</i>

35. (d) Consistency of PEO's with Mission of the Department

	Mission Stmnt. - 1	Mission Stmnt. - 2	Mission Stmnt. - 3	Mission Stmnt. - 4	Mission Stmnt. - 5
PEO - 1	3	3	3	1	3
PEO - 2	3	2	2	2	3
PEO - 3	3	3	3	3	3
PEO - 4	2	3	3	2	3
PEO - 5	3	1	2	3	2

35. (e) PO – Program Outcomes

PO - 1	<i>An ability to independently carry out research /investigation and development work to solve practical problems.</i>
PO - 2	<i>An ability to write and present a substantial technical report/document.</i>
PO - 3	<i>Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.</i>

35. (f) Consistency of PEO's with Program Outcomes (PO)

	Program Outcomes (PO)		
	1	2	3
PEO - 1			
PEO - 2			
PEO - 3			
PEO - 4			
PEO - 5			

3 – High Correlation, 2 – Medium Correlation, 1 – Low Correlation

35. (g) Programme Structure: M.Tech Food and Nutritional Biotechnology

Professional Core Courses (C)						
Course Code	Course Title	Hours/Week			C	
		L	T	P		
21FPC501J ²	Food Safety System and Quality Monitoring	3	0	2	4	
21FPC502T	Nutrition and Clinical Studies	3	0	0	3	
21FPC503J	Food Biotechnology	3	0	2	4	
21FPC504J	Food Engineering	3	0	2	4	
21FPC505J	Analytical Techniques and Instruments for Food Processing	3	0	2	4	
21IPC501J ²	Research Methodology	2	1	2	4	
21FPC601T ¹	Case Studies	3	0	0	3	
Total Credits					26	

Professional Elective Courses (E) (Any 7 Courses)						
Course Code	Course Title	Hours/Week			C	
		L	T	P		
21FPE510T	Advanced Techniques in Food Preservation	3	0	0	3	
21FPE511T	Handling, Packaging and Storage of Food Products	3	0	0		
21FPE512T	Food Microbiology and Fermentation Technology	3	0	0	3	
21FPE513T	Biochemistry of Processing and Preservation	3	0	0		
21FPE514T	Crop Processing Technology	3	0	0	3	
21FPE515T	Post-Harvest Technology of Fruits and Vegetables	3	0	0		
21FPE516T ³	Advanced Dairy Technology	3	0	0	3	
21FPE517T	Meat, Poultry and Fish Processing Technology	3	0	0		
21FPE518T	Nutraceutical and Functional Foods	3	0	0	3	
21FPE519T	Food Ingredients, supplements and Fortification Technology	3	0	0		
21FPE520T	Food Industry Waste Management for Sustainability	3	0	0	3	
21FPE521T	Bakery and Confectionery Technology	3	0	0		
21FPE600T ¹	Journal Publication	0	0	0	3	
21FPE522T	Beverage Technology	3	0	0		
21FPE523T ³	Innovative Designer Food Development Technology	3	0	0	3	
Total Credits					21	

Project Work, Internship In Industry / Higher Technical Institutions (P)						
Course Code	Course Title	Hours/Week			C	
		L	T	P		
21FPP501L	Specialization Project (OR)	0	0	40	20	
21FPP502L	Specialization Project	0	0	30	15	
21FPP503L	Domain Internship	0	0	10	5	
Total Credits					20	

Assessment by Open Book Examination (²)						
Course Code	Course Title	Hours/Week			C	
		L	T	P		
21FPC501J ²	Food Safety System and Quality Monitoring	3	0	2	4	
21IPC501J ²	Research Methodology	2	1	2	4	

Course Delivery by online mode (³)						
Course Code	Course Title	Hours/Week			C	
		L	T	P		
21FPE516T ³	Advanced Dairy Technology	3	0	0	3	
21FPE523T ³	Innovative Designer Food Development Technology	3	0	0	3	

Open Elective Courses (O) (Any 1 Course)						
Course Code	Course Title	Hours/Week			C	
		L	T	P		
21FPO501T	Food Science and Nutrition	3	0	0	3	
21FPO502T	Brewing Technology	3	0	0	3	
Total Credits					3	

100% assessment by the Department (¹)						
Course Code	Course Title	Hours/Week			C	
		L	T	P		
21FPC601T ¹	Case Studies	3	0	0	3	
21FPE600T ¹	Journal Publication	0	0	0	3	

All elective courses may be studied under MOOC platform

¹ 100% assessment by the Department

² Assessment by Open Book Examination

³ Course Delivery through online mode

35. (h) Implementation Plan: M.Tech Food and Nutritional Biotechnology

Semester - I							Semester - II						
Code	Course Title	Hours/Week					Code	Course Title	Hours/Week				
		L	T	P	C				L	T	P	C	
21FPC501J ²	Food Safety System and Quality Monitoring	3	0	2	4		21FPC504J	Food Engineering	3	0	2	4	
21FPC502T	Nutrition and Clinical Studies	3	0	0	3		21FPC505J	Analytical Techniques and Instruments for Food Processing	3	0	2	4	
21FPC503J	Food Biotechnology	3	0	2	4		21FPE512T	Food Microbiology and Fermentation Technology	3	0	0		3
21IPC501J ²	Research Methodology	2	1	2	4		21FPE513T	Biochemistry of Processing and Preservation	3	0	0		
21FPE510T	Advanced Techniques in Food Preservation	3	0	0		3	21FPE514T	Crop Processing Technology	3	0	0		
21FPE511T	Handling, Packaging and Storage of Food Products	3	0	0			21FPE515T	Post-Harvest Technology of Fruits and Vegetables	3	0	0		3
Total Credits					18		21FPE516T ³	Advanced Dairy Technology	3	0	0		
							21FPE517T	Meat, Poultry and Fish Processing Technology	3	0	0		3
							Total Credits					17	
Semester - III							Semester - IV						
Code	Course Title	Hours/Week					Code	Course Title	Hours/Week				
		L	T	P	C				L	T	P	C	
	Open Elective	3	0	0	3		21FPP501L	Specialization Project	0	0	40	20	
21FPE518T	Nutraceutical and Functional Foods	3	0	0		3	(OR)						
21FPE519T	Food Ingredients, supplements and Fortification Technology	3	0	0			21FPP502L	Specialization Project	0	0	30	15	
21FPE520T	Food Industry Waste Management for Sustainability	3	0	0		3	21FPP503L	Domain Internship	0	0	10	5	
21FPE521T	Bakery and Confectionery Technology	3	0	0			Total Credits					20	
21FPE600T ¹	Journal Publication	0	0	0									
21FPE522T	Beverage Technology	3	0	0		3							
21FPE523T ³	Innovative Designer Food Development Technology	3	0	0									
21FPC601T ¹	Case Studies	3	0	0	3								
Total Credits					15								

Students must register either 21FPP501L or 21FPP502L and 21FPP503L both in fourth semester

35. (i) Program Articulation Matrix: M.Tech Food and Nutritional Biotechnology

Course Code	Course Name	Programme Outcomes		
		1	2	3
21FPC501J	Food Safety System and Quality Monitoring			
21FPC502T	Nutrition and Clinical Studies			
21FPC503J	Food Biotechnology			
21FPC504J	Food Engineering			
21FPC505J	Analytical Techniques and Instruments for Food Processing			
21IPC501J	Research Methodology	3	2.6	
21FPC601T	Case Studies			
21FPE510T	Advanced Techniques in Food Preservation			
21FPE511T	Handling, Packaging and Storage of Food Products			
21FPE512T	Food Microbiology and Fermentation Technology			
21FPE513T	Biochemistry of Processing and Preservation			
21FPE514T	Crop Processing Technology			
21FPE515T	Post-Harvest Technology of Fruits and Vegetables			
21FPE516T	Advanced Dairy Technology			
21FPE517T	Meat, Poultry and Fish Processing Technology			
21FPE518T	Nutraceutical and Functional Foods			
21FPE519T	Food Ingredients, supplements and Fortification Technology			
21FPE520T	Food Industry Waste Management for Sustainability			
21FPE521T	Bakery and Confectionery Technology			
21FPE600T	Journal Publication			
21FPE522T	Beverage Technology			
21FPE523T	Innovative Designer Food Development Technology			
	Open Elective			
21FPP501L	Specialization Project			
21FPP502L	Specialization Project			
21FPP503L	Domain Internship			
Program Average				

3 – High Correlation, 2 – Medium Correlation, 1 – Low Correlation



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