## **ACADEMIC CURRICULA**

# POST GRADUATE DEGREE PROGRAMMES

**Master of Technology** 

(Choice Based Flexible Credit System)

**Regulations 2021** 

Volume - 21 Curriculum



#### SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

(Deemed to be University u/s 3 of UGC Act, 1956)
Kattankulathur, Chengalpattu District 603203,
Tamil Nadu, India



# SRM INSTITUTE OF SCIENCE AND TECHNOLOGY Kattankulathur, Chengalpattu District 603203, Tamil Nadu, India

#### 36 M.Tech in Food Safety and Quality Management

#### 36. (a) Department Vision Statement

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

#### 36. (b) Department Mission Statement

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

#### 36. (c) Program Education Objectives (PEO)

PEO - 1	To educate and enrich knowledge on process operation involved in food manufacturing.
PEO - 2	To provide opportunity to study job oriented courses like ISO 22000 (FSMS). HACCP, FoSTAC courses during their course of study.
PEO-3	To study latest developments in export and import policies and implementation in various countries.
PEO - 4	To motive the students to carry out research studies in advanced sectors in food safety and quality.
PEO - 5	To create knowledge and skill set to become food entrepreneur / food safety professional / technocrats.

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

	Mission Stmt 1	Mission Stmt 2	Mission Stmt 3	Mission Stmt 4	Mission Stmt 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

#### 36. (e) PO – Program Outcomes

PO - 1	An ability to independently carry out research /investigation and development work to solve practical problems.
PO - 2	An ability to write and present a substantial technical report/document.
PO - 3	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.

#### 36. (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									

<sup>3 -</sup> High Correlation, 2 - Medium Correlation, 1 - Low Correlation

#### 36. (g) Programme Structure: M.Tech Food Safety and Quality Management

Professional Core Courses (C)						Professional Elective Courses (E)						
Course Hours/							(Any 7 Courses)					
	Week		Course Course		Hours/							
Code	Title		L	T	Р	С			٧	Vee		С
21FPC511T	Food Toxicology Food Processing and Preservation		3	0	0	3	Code 21FPE551T	Title Advanced Food Chemistry	3	T 0	P 0	C
21FPC512J	Techniques		3	0	2	4	21FPE551T	Food Additives and Ingredients	3	0	0	3
21FPC513J	Advanced Food Microbiology		3	0	2	4		Instrumentation and Data			Ť	1
21FPC514J	Food Laws and Regulations		3	0	2	4	21FPE553T	Acquisition for Food Industries	3	0	0	3
21FPC515J <sup>2</sup>	Food Safety and Quality Auditing		3	0	2	4	21FPE554T	Hygiene, Public Health and	3	0	0	3
21IPC501J <sup>2</sup>	Research Methodology		2	1	2	4	2111 20041	Industry Safety	Ŭ	Ü	U	
21FPC601T <sup>1</sup>	Case Studies Total Cred	dita	3	0	0	3 <b>26</b>	21FPE555T 3	Food Safety Systems in Dairy Industries	3	0	0	
	Total Cred	นแจ		-	-	20		Food Safety Systems in Fruits and				3
		C			4		21FPE556T	Vegetables	3	0	0	
		Α.	-		- 4.3		21FPE557T	Food Processing Plant Design	3	0	0	
	Project Work, Internship In						21FPE558T	Sensors for Food safety and	3	0	0	3
In	dustry / Higher Technical Institutio	ns (	P)				2777 20007	Quality	Ŭ	Ů	_	ļ
				ours	./		21FPE651T	Food Safety and Quality Assurance for Meat, Poultry and	3	0	0	
Course	Course			/eek			211 F L 0311	Sea food Industries	3	U	U	
Code	Title		L	Т	Р	С		Food Safety and Quality				3
21FPP501L	Specialization Project		0	0	40	20	21FPE652T	Assurance for Bakery and	3	0	0	
	(OR)		- 1	_ 1	1		0.45550505	Confectionery Industries		•	•	
21FPP502L	Specialization Project		0	0	30	15	21FPE653T	Food Safety Systems in Beverage	3	0	0	
21FPP503L	Domain Internship  Total Cred	ite	0	0	10	5 <b>20</b>	21FPE654T	Food Safety and Quality Assurance for Nutraceutical and	3	0	0	3
	Total cred	ilo i	٠.	4.5		20	2111 20011	Functional Food products			Ü	Ü
3 .			40		Ξź		21FPE600T1	Journal Publication	0	0	0	
				į.	7		21FPE655T <sup>3</sup>	AI and ML based Food Quality	3	0	0	
	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	75	97	10		4.	2111 20001	Monitoring System	_	Ů	_	3
	1. Com 20.10	155	٠.		v		21FPE656T	Logistics and Supply Chain Management	3	0	0	
	The second second	-			ú.			Total Credits				21
					M	Ŋ.		Open Elective Courses (0)				Ξ
•	100% assessment by the Departme	nt (1	)					(Any 1 Course)				
Course	Course			ours Veel			Course	Course		urs/ eek		
Code	Title		L	T	Р	С	Code	Title	L	T F	)	С
21FPC601T <sup>1</sup>	Case Studies		3	0	0	3	21FPO503T	Baking Technology	3	0 0	)	3
21FPE600T <sup>1</sup>	Journal Publication		0	0	0	3		Total Credits				3
	Occurs Delivers by online words	/2\				44.	- XI - I			٥.		
Course Delivery by online mode (3)  Assessment by Open Book Examination (2)  Hours/												
Course	Course		Veel	(			Course Course Wee			Hours/ Week		
Code	Title	L	Τ	Р	(	)	Code	Title	_	_	Р	С
	Food Safety Systems in Dairy Industries	3	0	0	3	3				0	2	4
21EDE655T3	Al and ML based Food Quality Monitoring System	3	0	0	;	3	2111000132	nesearch methodology	Z	1	2	4
	rses may be studied under MOOC pla	tfor	n									_

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

#### 36. (h) Implementation Plan: M.Tech Food Safety and Quality Management

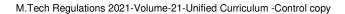
	Semester - I		Semester - II								
Code	Code Course Title		Hours/ Week			Code	Course Title		Hours/ Week		
		L	Τ	Р	С				Τ	Р	С
21FPC511T	Food Toxicology	3	0	0	3		Food Laws and Regulations		0	2	4
21FPC512J	Food Processing and Preservation Techniques	3	0	2	4	ĺ	Food Safety and Quality Auditing Instrumentation and Data Acquisition	3	0	2	4
21FPC513J	Advanced Food Microbiology	3	0	2	4	21FPE553T	for Food Industries	3	0	0	
	Research Methodology	2	1	2	4	045055547	Hygiene, Public Health and Industry	_	^	_	3
	Advanced Food Chemistry	3	0	0		21FPE554T	Safety	3	0	0	
	Food Additives and Ingredients  Total Credits	3	0	0	3 <b>18</b>	21FPE555T <sup>3</sup>	Food Safety Systems in Dairy Industries	3	0	0	
	Total Credits					21FPE556T	Food Safety Systems in Fruits and Vegetables	3	0	0	3
						21FPE557T	Food Processing Plant Design	3	0	0	
		1			٠.	21FPE558T	Sensors for Food Safety and Quality	3	0	0	3
		٦.	,71		-		Total Credits				17
							247472	<u> </u>			
	Semester - III						Semester - IV				
		Hours/							Hours/		
Code	Course Title	٧	Veel			Code	Course Title		Vee	_	_
		L	Τ	Р	С	045555044	0	L	1	P	C
	Open Elective	3	0	0	3	21FPP501L	Specialization Project	0	0	40	20
	Food Safety and Quality Assurance					0.45555004	(OR)	_	<u> </u>		145
21FPE651T	for Meat, Poultry and Sea Food	3	0	0			Specialization Project	0		30	15
	Industries				3	21FPP503L	Domain Internship	0	0	10	5
	Food Safety and Quality Assurance				J		Total Credits				20
21FPE652T	for Bakery and Confectionery Industries	3	0	0		18301					
21FPE653T	Food Safety Systems in Beverage	3	0	0				7			
21FPE654T	Food Safety and Quality Assurance for Nutraceutical and Functional Food Products	3	0	0	3						
21FPE600T 1	Journal Publication	0	0	0		1 CAR					
21FPE655T <sup>3</sup>	Al and ML based Food Quality Monitoring System	3	0	0	3	11.5					
21FPE656T	Logistics and Supply Chain Management	3	0	0	3	74					
	Case Studies	3	0	0	3	4.5	1 1				
21FPC601T <sup>1</sup>	Case Studies	٥	0		15						

<sup>#</sup> Students must register either 21FPP501L or 21FPP502L and 21FPP503L both in fourth semester

#### 36. (i) Program Articulation Matrix: M.Tech Food Safety and Quality Management

Course	Course Name	Programme Outcomes						
Code		1	2	3				
21FPC511T	Food Toxicology							
	Food Processing and Preservation Techniques							
	Advanced Food Microbiology							
	Food Laws and Regulations							
21FPC515J	Food Safety and Quality Auditing							
	Research Methodology	3	2.6					
	Case Studies							
21FPE551T	Advanced Food Chemistry							
	Food Additives and Ingredients							
21FPE553T	Instrumentation and Data Acquisition for Food Industries							
	Hygiene, Public Health and Industry Safety							
	Food Safety Systems in Dairy Industries							
	Food Safety Systems in Fruits and vegetables							
	Food Processing Plant Design	<b>.</b> "#_						
	Sens <mark>ors for Food</mark> safety and Quality							
21FPE651T	Fo <mark>od Safety an</mark> d Quality Assurance for Meat, Poultry and Sea food Industries							
	Food Safety and Quality Assurance for Bakery and Confectionery Industries							
	Food Safety Systems in beverage	1		L.				
	Food Safety and Quality Assurance for Nutraceutical and Functional Food products							
	Journal Publication	1 >		_				
21FP <mark>E65</mark> 5T	Al and ML based Food Quality monitoring system	1						
21FPE656T	Logistics and Supply Chain Management	N 1/						
	Open Elective							
	Specialization Project							
	Specialization Project							
21FPP503L	Domain Internship							
	Program Average							

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





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