SCHOOL OF VOCATIONAL STUDIES & APPLIED SCIENCES

Programme and Course Objectives

DEPARTMENT OF FOOD PROCESSING & TECHNOLOGY

Department of Food Processing & Technology

NUMBER OF PROGRAMMES OFFERED: 05

M.Tech Food Processing & Technology

M. Sc. Food Science

B.Tech Food Processing & Technology

Post Graduate Diploma in Food Safety & Quality Management (FSQM)

Post Graduate Diploma in Food Science & Technology (FST)

$\frac{PROGRAMME - M.TECH \ FOOD \ PROCESSING \ \&}{TECHNOLOGY}$

PROGRAM OBJECTIVE:

The objective of this course is to make the student aware about the basics of developing new varieties of crops and foods products.

		Semester- I				
S.No	Code	Subject Name				
1.	MA-505	Statistical methods				
		n some concepts regarding data analysis in Food Science and Tec	hnology			
2.	FT-503	Engineering Properties of Biomaterials and Applications				
		derstand the basics of Food engineering and its applications				
2. To	2. To elaborate the basic concepts of material and energy balance, fluid dynamics, thermal process calculations etc.					
3.	FT-505	Advances in Food Process Technology	3			
Obje	ctives: 1. The c	ourse aim is to introduce the students to the area of food produce	cessing. This is			
_		e understanding of a detailed study of food processing and technol	-			
4.	FT-507	Food Safety and Standards	3			
indus 2. To	try and food serv help become ski	aracterize different type of food hazards, physical, chemical and byice establishments illed in systems for food safety surveillance regulatory and statutory bodies in India and the world	piological in the			
5.	FT- 518	Advanced Food Chemistry and Microbiology	3			
advan subjec	ced level. This	rse is targeted to develop the knowledge of students in Food is necessary for effective understanding of food processing will enable students to appreciate the similarities and compin foods.	and technology			
6.	FT-511	Food Beverages	3			
of bev	verages	de an understanding of the science and technology for processing	different types			
	CTICALS		T			
7.	FT-551	Advance Food Processing Lab-I*	4			
		Total Contact Hours	27			
		Semester- II	•			
1.	FT-502	Processing of Meat, Fish and Poultry Products	3			
Objectives: The course aims to develop the knowledge of students in the area of animal product processing and technology. • This course will enable students to appreciate the application of scientific principles in the processing of these materials.						
2.	FT-504	Nutraceutical and functional Foods	3			

2.To			
3.	FT-508	Advances in Cereal and Pulse Processing	3
	ectives: This is e foods.	necessary for effective understanding specific aspects of	food processing related
4.		DSE-I	3
	FT- 506	Food Texture and Rheology	-
	ectives: To expended of food pro	ose the students to the fundamental knowledge of food,	its properties and differ
mem	FT-501	Cryogenic Systems In Food Processing	
Obje	ectives: 1. To te	each about the mechanism and operation of freezing.	
-		rious equipment and process used in freezing.	
3. To	o impart knowle	edge about quality and safety aspect of various frozen pro	ducts.
5		DSE-II	3
Obje	essing and tech ciples in the pro	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials.	
proce princ	ectives: The coressing and technologies in the profession of FT-509 ectives: To prove	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply	area of vegetable and fr ne application of scienti
Objeto Objeto	ectives: The coressing and tech ciples in the pro	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply	area of vegetable and fr ne application of scienti
Objection of the control of the cont	ectives: The coressing and technologies in the profession of FT-509 ectives: To prove	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply	area of vegetable and fr ne application of scienti
Objection of the control of the cont	ectives: The coressing and technologies in the properties of the p	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply ndustry Generic Elective Functional Foods and Ingredients	area of vegetable and fine application of scientification of scientification management in
Objection of the control of the cont	ectives: The coressing and technologies in the properties of the p	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply ndustry Generic Elective	area of vegetable and fine application of scientification of scientification management in
Objection of the control of the cont	ectives: The coressing and technologies in the profession of the p	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply ndustry Generic Elective Functional Foods and Ingredients	area of vegetable and fine application of scientification of scientification management in
Objection of the control of the cont	FT- 514 ectives: To imper and disease FT- 512	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply industry Generic Elective Functional Foods and Ingredients art the concept of nutraceuticals, functional ingredients are the concept of nutraceuticals.	chain management in 3
Objection of the control of the cont	FT-514 ectives: To imper and disease FT-512 ectives: Food to inicals present in	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply industry Generic Elective Functional Foods and Ingredients art the concept of nutraceuticals, functional ingredients art the concept of nutraceuticals, functional ingredients are foods. The chemical agents can be man-made (e.g.	area of vegetable and fine application of scientification of scientifi
Objection of the content of the cont	FT-514 ectives: To import and disease FT-512 ectives: Food to nicals present in the pro-	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management wide an introduction to the concepts and tools of supply industry Generic Elective Functional Foods and Ingredients eart the concept of nutraceuticals, functional ingredients are the concept of nutraceuticals, functional ingredients are foods. The chemical agents can be man-made (e.g. ants originating with processing machinery, or packaging machinery.	area of vegetable and fine application of scientification of scientifi
Objection of the content of the cont	FT-514 ectives: To import and disease FT-512 ectives: Food to nicals present in the pro-	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management wide an introduction to the concepts and tools of supply industry Generic Elective Functional Foods and Ingredients art the concept of nutraceuticals, functional ingredients art the concept of nutraceuticals, functional ingredients are foods. The chemical agents can be man-made (e.g. ants originating with processing machinery, or packaginal, animal or plant toxins)	area of vegetable and fine application of scientification of scientifi
Objection origin	FT-514 ectives: To provand beverage in FT-514 ectives: To import and disease FT-512 ectives: Food to nicals present in tives, contaminan (e.g., microbi	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management wide an introduction to the concepts and tools of supply industry Generic Elective Functional Foods and Ingredients art the concept of nutraceuticals, functional ingredients art the concept of nutraceuticals, functional ingredients are the concept of nutraceuticals and Toxicology exicology is concerned with assessing the injurious effort foods. The chemical agents can be man-made (e.g. ants originating with processing machinery, or packaginal, animal or plant toxins) PRACTICALS	chain management in a systems and foods and their role fects on living systems are materials) or of natural
Objection original or	FT-514 ectives: To import and disease FT-512 ectives: Food to nicals present in the province of the province	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management vide an introduction to the concepts and tools of supply industry Generic Elective Functional Foods and Ingredients art the concept of nutraceuticals, functional ingredients art the concept of nutraceuticals, functional ingredients are foods. The chemical agents can be man-made (e.g. ants originating with processing machinery, or packaginal, animal or plant toxins) PRACTICALS Advance Food Processing Lab II*	area of vegetable and fine application of scientification of scientifi
Objection original content of the content of the content original content or cont	FT-514 ectives: To provand beverage in FT-514 ectives: To import and disease FT-512 ectives: Food to nicals present in tives, contaminan (e.g., microbi	Post-Harvest Processing Of Fruits & Vegetables urse aims to develop the knowledge of students in the a nology. This course will enable students to appreciate the cessing of these materials. Food Supply Chain Management wide an introduction to the concepts and tools of supply industry Generic Elective Functional Foods and Ingredients art the concept of nutraceuticals, functional ingredients art the concept of nutraceuticals, functional ingredients are the concept of nutraceuticals and Toxicology exicology is concerned with assessing the injurious effort foods. The chemical agents can be man-made (e.g. ants originating with processing machinery, or packaginal, animal or plant toxins) PRACTICALS	chain management in a systems and foods and their role fects on living systems are materials) or of natural

		Semester- III	
1.	FT-601	Advanced Food Packaging	3
Obj	ectives: The o	course aims to develop the knowledge of students in the area of packaging	g of foods
and	the related te	echnology used. This course will enable students to appreciate the appli	cation of
			cution of
scier	ntific principle	es in the packaging of foods.	
	ET (02		
2	FT-603	Instrumental Techniques in Food Analysis	3
			<u> </u>
_		hable the students to understand the principles and methods of advanced to	echniques
3.	e analysis of the FT-611	Flavour Technology	3
٥.		The void Teelmology	
Obj	ectives: This	course aims to explain the flavour, Spice and Plantation crops applicatio	n in food
indu	stry		
4.		DSE III	3
	FT- 605	Frozen Foods And Cold Chain Management	1
_	_	rovide an introduction to the concepts and tools of supply chain managem	ent in the
1000	and beverage	e industry	
	FT- 607	Advances in Dairy Engineering and Technology	
Obj		rovide in-depth knowledge in various unit operations and basic concepts	s in dairy
-	essing		<i>y</i>
5.		DSE-IV	3
٥.			3
٥.	FT 609	Food Industry Waste Management	3
			3
		Food Industry Waste Management reate awareness about environmental issues in food industry	3
	ectives: To cr	Food Industry Waste Management	
Obje	ectives: To cr	Food Industry Waste Management reate awareness about environmental issues in food industry	
Obje	ectives: To cr	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods mpart the concept of nutraceuticals, functional ingredients and foods and	
Obje	FT-617 ectives: To in	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods mpart the concept of nutraceuticals, functional ingredients and foods and	
Obje	FT-617 ectives: To in	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods mpart the concept of nutraceuticals, functional ingredients and foods and	
Objetin he	FT-617 ectives: To in	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods mpart the concept of nutraceuticals, functional ingredients and foods and ase DSE-V	their role
Obje in he	FT-617 ectives: To intend disease FT 613	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods Inpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg.	their role
Obje in he	FT-617 ectives: To integrate and disease FT 613 ectives: 1.To	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods Inpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. understand the Enzyme kinetics, Inhibition kinetics, Immobilization	their role
Obje 6. Obje 2. To	FT-617 ectives: To inealth and disease FT 613 ectives: 1.To ounderstand to	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods Inpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. understand the Enzyme kinetics, Inhibition kinetics, Immobilization the concept of basic fermentation processes and its control systems etc.	their role
Obje Obje Obje 2. To 3. To	FT-617 ectives: To in ealth and disease FT 613 ectives: 1.To o understand to help studen	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods Inpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. understand the Enzyme kinetics, Inhibition kinetics, Immobilization	their role
Obje Obje Obje 2. To 3. To	FT-617 ectives: To intend the and disease of the student and the authorized the student at with focus of the student at with the student at	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods mpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. understand the Enzyme kinetics, Inhibition kinetics, Immobilization the concept of basic fermentation processes and its control systems etc. ats acquire a sound knowledge on diversities of foods, food habits and poin traditional foods.	their role
Obje in he 6. Obje 2. To 3. To India	FT-617 ectives: To cr FT-617 ectives: To in ealth and disea FT 613 ectives: 1.To o understand to o help studen a with focus of FT-615	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods Inpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. Understand the Enzyme kinetics, Inhibition kinetics, Immobilization the concept of basic fermentation processes and its control systems etc. Its acquire a sound knowledge on diversities of foods, food habits and pon traditional foods. IPR and Patenting in Food technology	their role
Obje in he 6. Obje 2. To 3. To India	FT-617 ectives: To intend the and disease the and disease the and the analysis of the properties of th	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods Inpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. understand the Enzyme kinetics, Inhibition kinetics, Immobilization the concept of basic fermentation processes and its control systems etc. ats acquire a sound knowledge on diversities of foods, food habits and poin traditional foods. IPR and Patenting in Food technology low research ethics	their role
Obje in he 6. Obje 2. To 3. To India	FT-617 ectives: To intend the and disease the and disease the and the analysis of the properties of th	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods Inpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. Understand the Enzyme kinetics, Inhibition kinetics, Immobilization the concept of basic fermentation processes and its control systems etc. Its acquire a sound knowledge on diversities of foods, food habits and pon traditional foods. IPR and Patenting in Food technology	their role
Obje in he 6. Obje 2. To 3. To India	FT-617 ectives: To intend the and disease the and disease the and the analysis of the properties of th	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods Inpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. understand the Enzyme kinetics, Inhibition kinetics, Immobilization the concept of basic fermentation processes and its control systems etc. ats acquire a sound knowledge on diversities of foods, food habits and poin traditional foods. IPR and Patenting in Food technology low research ethics	their role
Obje in he 6. Obje 2. To 3. To India	FT-617 ectives: To intend the and disease the and disease the and the analysis of the properties of th	Food Industry Waste Management reate awareness about environmental issues in food industry Therapeutic Foods mpart the concept of nutraceuticals, functional ingredients and foods and asse DSE-V Fermented Foods and Bioprocess Engg. understand the Enzyme kinetics, Inhibition kinetics, Immobilization the concept of basic fermentation processes and its control systems etc. ats acquire a sound knowledge on diversities of foods, food habits and poin traditional foods. IPR and Patenting in Food technology low research ethics evance and significance of IPR	their role

Objectives: The main objective of the dissertation work is to enhance practical and professional skills of the students thus providing an edge over others in finding desired professional roles and career advancement

WW WILL WILL WILL WILL WILL WILL WILL					
	Total Contact Hours	24			
	Semester- IV				
FT654	Dissertation-II	20			
Objectives: The m	ain objective of the dissertation work is to enhance	•			

Objectives: The main objective of the dissertation work is to enhance practical and professional skills of the students thus providing an edge over others in finding desired professional roles and career advancement

Total credits for all semester	0
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PROGRAMME – M.SC. FOOD SCIENCE

PROGRAM OBJECTIVE: It is an inclusive program whose mission is to provide quality and best opportunities in the areas of research in food science and food service management.

S.No Code Subject Name 1. FS-401 FoodprocessTechnology Objectives: 1. Tounderstandtheareaof Foodengineering 1. Toelaboratethebasicconceptsofmaterialandenergybalance,fluiddynamics,thermalprocess calculationses 2. FS-403 FoodMicrobiology Objectives: 1.Toprovideawareness aboutnutritionandgrowthofmicroorganisms. 2. Toimpartknowledge about roleofmicroorganisms inair,waterandsoil. 3. Tounderstandtheroleofmicroorganismsinfermentedfoods,foodspoilage,foodinfectionsandintoxication
Objectives: 1. Tounderstandtheareaof Foodengineering 1. Toelaboratethebasicconceptsofmaterialandenergybalance,fluiddynamics,thermalprocess calculationse 2. FS-403 FoodMicrobiology Objectives: 1.Toprovideawareness aboutnutritionandgrowthofmicroorganisms. 2. Toimpartknowledge about roleofmicroorganisms inair,waterandsoil.
Toelaboratethebasicconceptsofmaterialandenergybalance,fluiddynamics,thermalprocess calculationse FS-403 FoodMicrobiology Objectives: 1.Toprovideawareness aboutnutritionandgrowthofmicroorganisms. Toimpartknowledge about roleofmicroorganisms inair,waterandsoil.
FS-403 FoodMicrobiology Objectives: 1.Toprovideawareness aboutnutritionandgrowthofmicroorganisms. Toimpartknowledge about roleofmicroorganisms inair,waterandsoil.
Objectives: 1.Toprovideawareness aboutnutritionandgrowthofmicroorganisms. 2. Toimpartknowledge about roleofmicroorganisms inair,waterandsoil.
2. Toimpartknowledge about roleofmicroorganisms inair, waterandsoil.
3. Tounderstandtheroleofmicroorganismsinfermentedfoods foodspoilage foodinfections and intoxication
3. FS-405 FoodChemistryandnutrition
Objectives: 1. The course aims to develop the knowledge of students in the basic area of Food Chemistry.
2. This course will enable students to appreciate the similarities and complexities of the chemical components in food and the components of the chemical
4. FS-407 TechnologyofFoodProcessing&Preservation
Objectives: To expose the students to the principles and different methods of food processing and preservation.
5. FS-409 FoodSafetyandQuality
Z.Tohelpbecomeskilledinsystemsforfoodsafetysurveillance GenericElective
ES-507 WasteManagement
Objectives: Waste reduction would avoid putting additional pressure on scarce natural resources, security and reduce environmental impacts generated by agriculture
CH-407 Characterization Techniques-I
Objectives: To characterize food products in terms of chemical composition
PRACTICALS
1. FS-411 FoodChemistryLab
2. FS-413 FoodMicrobiologyLab
Total Contact Hours
Semester- II
1. FS-404 Cereal,LegumeandOilCropTechnology
Objectives: 1. The course aimstode velop the knowledge of students in the area of pulse and oil seed processing and techniques.
2. This is necessary for effective understanding specific aspects of foodprocessing related to these foods.
2. Thisisheeessarytotetteetiveunderstandingspeenteuspeetsottoodprocessingretatedtotteseroods.

Ob:4'	FS-408	Technology of Meat, Fish andPoultryProducts
Objectives	s: 1.The course ai	ms to develop the knowledge of students in the area of animal productprocessingar
technology		
2. This	course will e	nable students to appreciate the application of scientific principles
	ingofthesemateria	
4.	FS-410	Technology of FunctionalFoodsandNutraceuticals
Objectives	5:	
		oncepts of Nutraceuticals and functional food, their chemicalnatureand methods ofex
		Nutraceuticalsandfunctionalfoodinhealthanddisease
5.	FS-424	Post-HarvestTechnology
		vledgeregardingbiochemistryandphysiologyoffruitsandvegetablesandtheirroleinpre-
narvestena 6.	ngesinproductqua	DSE-I
0.	FS-412	FoodAdditives
Ohi		ninsightintoadditivesthatarerelevanttoprocessedfoodindustryforshelflifeextension,
	cessingaidsand ser	
	C	offoodadditivesin foodqualitycontrol.
	•	ues ofbestuseoffoodadditives.
	=	Foodadditivesinhealthmaintenanceandcureofdiseases
<u>J. 100</u>	FS-414	TechnologyofPlantationCropsandSpices
Objectives		identswiththe typesofplantationcropsandtheirprocessingtechniques.
		swiththeprocessing of spices and condiments.
	FS-416	SnackFoodTechnology
Objec	tives: Toimpartkr	nowledgerelatedtovarioussnackfoodsandtheirmanufacturingtechniques.
7.		DSE-II
	FS-418	Technology of OilseedsandFats
•		nstodeveloptheknowledgeofstudentsintheareaofpulseandoilseedprocessingandtechnol lestudentstoappreciatetheapplicationofscientificprinciplesintheprocessingofthesemate
2.11	inscourse withernao.	iestudentstoappreeratetteappneationorseientmeprinerpiesintneprocessingortnesemat
	FS-420	InnovativeTechniquesinFoodProcessing
OF:		irse a imsto de velop the knowledge of students in the area of emerging or alternative technologies.
to fo	oodprocessing.	
to fo		olestudentstounderstandtheadvantagesanddisadvantagesoverexistingtechnologies.
to fo	his coursewillenab	
to fo	his coursewillenab	FoodSupply ChainManagement
to fo	his coursewillenab	FoodSupply ChainManagement
to fo	his coursewillenab	FoodSupply ChainManagement
to fo	his coursewillenab	FoodSupply ChainManagement anintroductiontotheconceptsandtoolsofsupplychainmanagementinthefoodand beverage
to fo 2.Th	FS-422 etives: Toprovidea	FoodSupply ChainManagement anintroductiontotheconceptsandtoolsofsupplychainmanagementinthefoodand beverage PRACTICALS
to fo 2.Th Object	FS-422 etives: Toprovidea	FoodSupply ChainManagement anintroductiontotheconceptsandtoolsofsupplychainmanagementinthefoodand beverage PRACTICALS Cereal,Legumeand OilseedsanalysisLab
Object 1. 2.	FS-422 etives: Toprovidea FS-517 FS-519	FoodSupply ChainManagement anintroductiontotheconceptsandtoolsofsupplychainmanagementinthefoodand beverage PRACTICALS Cereal,Legumeand OilseedsanalysisLab FruitsandVeg.TechLab
Object 1. 2.	FS-422 etives: Toprovidea FS-517 FS-519	FoodSupply ChainManagement anintroductiontotheconceptsandtoolsofsupplychainmanagementinthefoodand beverage PRACTICALS Cereal,Legumeand OilseedsanalysisLab FruitsandVeg.TechLab Seminar

Objective	es: 1.The course	aims to develop the knowledge of students in the area of emer
alternative	etechnologiesapplied	1
	0 11	d to foodprocessing. ble students to understand the advantages and disadvantages overexistingtechnologic
— • = :	III5 COULSC WIII CINC	To students to understand the advantages and disadvantages overstanding commences.
2.	FS-503	FoodPackagingTechnology
		ms to develop the knowledge of students in the area of packaging of foodsand
technology		
		blestudentstoappreciatetheapplicationofscientificprinciplesinthepackagingoffoods.
3.	FS-505	TechniquesinFoodAnalysis
		dentstounderstandtheprinciplesandmethodsofadvancedtechniquesin theanalysis offo
~ .	202	donielouidate di maria de la companya de la company
4.	FS-507	Technology of Milk and MilkProducts
Objective	:s: Tointroducethest	udentstodairyindustry,propertiesandprocessingofmilk,manufactureofdairyproducts,s
and efflue	nttreatmentin dairyi	ndustry
	T0 500	T
5.	FS-509	TechnologyofFermentedFoods TechnologyofFermentedFoods
		neEnzymekinetics,Inhibitionkinetics,Immobilization
lerstandthed	conceptofbasicterme	entationprocesses anditscontrolsystemsetc
6		рае ш
6.	БС 511/СЦ	DSE-III IPR and Patent Laws in FoodSector/PatentLawandIPRIssues
	FS-511/CH 505	IPK and Patent Laws in Foodsector/PatentLawandir Kissues
•	es: 1.Followresearch	
•	es: 1.Followresearch	nethics and significanceof IPR
•	s: 1.Followresearch Inderstandrelevance	and significance of IPR
2.U	FS-513	and significance of IPR FoodPlantDesignandSanitation
2.U Objectives	FS-513 Toenablethestuder	and significance of IPR
2.U Objectives	FS-513 Toenablethestuder	and significance of IPR FoodPlantDesignandSanitation ntsunderstandthevariousconceptsofprocessdevelopment,designconsideration and control of the significance of the s
2.U Objectives foodindustr	FS-513 Toenablethestuder FS-515	and significance of IPR FoodPlantDesignandSanitation ntsunderstandthevariousconceptsofprocessdevelopment,designconsideration and control of the control of
2.U Objectives foodindustr	FS-513 Toenablethestuder FS-515	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration and and and and and and and and and an
2.U Objectives foodindustr Objectives	FS-513 Toenablethestuder FS-515 Toprovidean under	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration and control and the serious and the seri
2.U Objectives foodindustr Objectives	FS-515 FS-521 FS-521	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration and and and and and and and and and an
2.U Objectives foodindustr Objectives	FS-513 Toenablethestuder FS-515 Toprovidean under	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration and control of the standing of the science and technology for processing different types of beverages PRACTICALS AdvanceFoodProcessingLab DairyTechnologyLab
2.U Objectives foodindustr Objectives 1. 2.	FS-513 FS-515 FS-521 FS-523	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration and and and and and and and and and an
2.U Objectives foodindustr Objectives 1. 2.	FS-513 FS-515 FS-521 FS-523	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration and and and and and and and and and an
2.U Objectives foodindustr Objectives 1. 2.	FS-513 FS-515 FS-521 FS-523	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration and control of the standing of the science and technology for processing different types of beverages PRACTICALS AdvanceFoodProcessingLab DairyTechnologyLab Training(4-6weeksSummertraining after II semester) Total Contact Hours
2.U Objectives foodindustr Objectives 1. 2. 3.	FS-513 FS-513 FS-515 FS-515 FS-521 FS-523 FS-555 FS-556	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration andce TechnologyofBeverages Interpretation and and and and and and and and and an
2.U Objectives foodindustr Objectives 1. 2. 3. Objective	FS-513 FS-515 FS-521 FS-523 FS-555 FS-556 es: The main object	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration and control of the standing of the science and technology for processing different types of beverages PRACTICALS AdvanceFoodProcessingLab DairyTechnologyLab Training(4-6weeksSummertraining after II semester) Total Contact Hours Semester- IV
2.U Objectives foodindustr Objectives 1. 2. 3. Objective	FS-513 FS-515 FS-521 FS-523 FS-555 FS-556 es: The main object	FoodPlantDesignandSanitation Intsunderstandthevariousconceptsofprocessdevelopment,designconsideration andce TechnologyofBeverages International TechnologyofBeverages Interna

PROGRAMME – B.TECH FOOD PROCESSING & TECHNOLOGY

PROGRAM OBJECTIVE:

Prepares the students for specific job role in various sectors in food processing industries and Professional organization.

	Semester- I				
S.No	Code	Credits			
	CY101/PH102	Engineering Chemistry/	4		
		Engineering Physics			
	MA105	Engineering Mathematics – I	4		
	EC101/ EE102	Basic Electronics engineering/Basic Electrical Engineering	4		
	CS101/ME101	Fundamentals of Computer Programming/ Engineering Mechanics	4		
	BS101	Human Values & Buddhist	2		

	Ethics	
EN101	English Proficiency	2
	PRACTICALS	
CE103/ME102	Engineering Graphics/	
	Workshop Practice	
CY 103/PH104	Engineering Chemistry	
	Lab/engineering Physics Lab	
CS 181/EN151	Computer Programming	
	Lab/Language Lab	
EC 181/EE104	Basic Electronics Lab/Basic	
	Electrical Engineering Lab	
GP	General Proficiency	
	Total Contact Hours	
	Semester- II	
PH102/ CY101	Engineering Physics/	4
	Engineering Chemistry	
MA102	Engineering Mathematics – II	4
EE102/ EC101	Basic Electrical Engineering/ Basic Electronics engineering/	4
ME101/ CS101	Engineering Mechanics/ Fundamentals of Computer Programming	4
FT 111	Introduction to food	2
	technology	
role of food processing for	imstointroducethestudentstotheareaofFoodscienceandtechn r human welfare. This course will enable to understand the spect to the producer, manufacturer andconsumer.	
ES101	Environmental studies	4
Objectives: Creating the awarer	ness about environmental problems among people.	·
ME102/ CE103	Workshop Practice/	2
	Engineering Graphics	
	PRACTICALS	
EN151/ CS 181	Language Lab/ Computer	1
	Programming Lab	
PH104/CY 103	Engineering Physics Lab/	1
	Engineering Chemistry Lab	
EE104/ EC 181	Basic Electrical Engineering	1
	Lab/ Basic Electronics Lab	
GP	General Proficiency	
	Semester III	I
FT-201	Principles of Food Processing & Preservation	3
	nts to the principles and methods of food processing and pre	
FT-203	Food Microbiology	3
Objectives: 1.To provide aware	eness about nutrition and growth ofmicroorganisms.	

•	role of micro		croorganisms in air, water andsoil. nisms in fermented foods, food spoilage	e, food
ME-221	Mechanics	of	Engineering Materials and Solids	4
Objectives: To produce and anal	yze products,	proc	cesses, or plant designs; to simulate and	test ho

machine, or food system operates

Generic Elective 1 3

BT207 IntroductoryBioinformatics

BT209 Biochemistry andBiotechnology

Objectives: To Understand sciences of molecular **biology**, immune chemistry, with the development of new **techniques**

new teck	nniques		
	BT203	Fundamental ofBiochemistry	
		Course offered by other school	
		Generic Elective 2	4
	MA201	EngineeringMathematics-III	
Objecti		me statistical information related to mathematical modelling and ca	lculation
<u> </u>	•	Course offered by other school	
		Open Elective	3
		1 2	
		PRACTICALS	
	FT-251	Food Microbiology Lab	2
		Generic Elective 3	3
		Laboratory-I: Cell biology, Microbiology	
		andBiochemistry	
		Laboratory-II: Basic BioinformaticsLab	
	GP	General Proficiency	0
		Total	26
		Semester IV	
1.	FT-202	Food Chemistry and Nutrition	3
	•	•	

Objectives: 1.The course aims to develop the knowledge of students in the basic area of Food Chemistry.

- 2. This is necessary for effective understanding of food processing and technology subjects.
- 3. This course will enable students to appreciate the similarities and complexities of the chemical components infoods.

2.	FT-204	Unit	Operations	in	Food Processing	3
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Objectives: 1.To impart of knowledge of different unit operations of food industries like size reduction, evaporation, drying, fluid flow and foodfreezing.

2.To introduce the concept of material and energy balance as applied to food engineering systems.

	ME-206	Fluid Mechanics	4
Objectiv	ves: enhancing the	design process and understanding of the basic physical i	nature of fluid
		its to the food processing industry in many areas, such as dryin	
mixing,		her application areas	
4.	EE-202	Measurement and Instrumentation	3
Objecti	ves: To evaluation of	of food involves instrumentation and use. of physical and	
chemical	techniques instead	d of variable human.	
	_		
5.	FT-206	Food Process Engineering	4
Objective	es: 1. To understand t	the area of Foodengineering	
•	2 To elaborate	the basic concepts of material and energy balance, fluid dyn	amics thermal
	process calcul		
	1		
6.		Open Elective	3
		•	<u>.</u>
		PRACTICALS	
1.	FT-252	Food Chemistry Lab	2
2.	FT-254	Food Processing Lab	2
	EE-220	Measurement/ and InstrumentationLab	1
		Total	25
		Semester- V	
1.	FT-301	Food Packaging	3
-		ms to develop the knowledge of students in the area of packagin	
and the r 2. T	related technologyus This course will ena		
and the r 2. T	related technologyus This course will ena	sed. able students to appreciate the application of scientific princi	ples in the
and the r 2. T	related technologyus This course will ena	sed.	
and the r 2. T p	related technologyus This course will ena ackaging offoods. FT-303	sed. able students to appreciate the application of scientific princi Fruit and Vegetable Processing	ples in the
and the r 2. T p 2. Objective	related technologyus This course will ena rackaging offoods. FT-303 Ves: 1. The course as	sed. able students to appreciate the application of scientific princi	ples in the
and the r 2. T p 2. Objective processing	related technologyus This course will ena eackaging offoods. FT-303 res: 1. The course as ng andtechnology.	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable	ples in the 3 le and fruit
and the r 2. T p 2. Objective processing 2.Th	related technologyus This course will ena ackaging offoods. FT-303 ves: 1. The course as ng andtechnology. his course will enal	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principals.	ples in the 3 lle and fruit
and the r 2. T p 2. Objective processin 2.Th	related technologyus This course will ena eackaging offoods. FT-303 res: 1. The course as ng andtechnology.	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principals.	ples in the 3 lle and fruit
and the r 2. T p 2. Objective processing 2.The processing	related technologyus. This course will enabackaging offoods. FT-303 Ves: 1. The course arms and technology. This course will enable tessing of fruits and tessing of fruits an	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principles to application the application to applicat	ples in the 3 ble and fruit ples in the
and the r 2. T p 2. Objective processing 2.Th processing 3.	related technologyus. This course will enabackaging offoods. FT-303 res: 1. The course arms and technology. This course will enable tessing of fruits and tessing of fruits are tessing of fruits and tessing of fruits and tessing of fruits are tessing of fruits and tessing of fruits are tessing of fruits and tessing of fruits and tessing of fruits are tessing of fruits are tessing of fruits and tessing of fruits are tessing of fruits are tessing of fruits and tessing of fruits are tessing of fruits ar	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principles to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principles advances in food process technology	ples in the 3 le and fruit ples in the
2. To positive processing 2. The processing 2. The processing 3. Objective processing 2. The processing 3.	related technologyus. This course will enable ackaging offoods. FT-303 Ves: 1. The course arms and technology. This course will enable tessing of fruits and tessing of fruits are tessing of fruits	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principle vegetables Advances in food process technology aims to develop the knowledge of students in the area of	ples in the 3 le and fruit ples in the
2. To positive processing 2. The processing 2. The processing 3. Objective processing 2. The processing 3.	related technologyus. This course will enable ackaging offoods. FT-303 Ves: 1. The course arms and technology. This course will enable tessing of fruits and tessing of fruits are tessing of fruits	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principles to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principles advances in food process technology	ples in the 3 le and fruit ples in the
and the r 2. T p 2. Objective processing 2.Th processing 3. Objective oralterna	related technologyus This course will enabackaging offoods. FT-303 res: 1. The course are and andtechnology. This course will enable the sessing of fruits and ressing of fruits and ressing of the sessing of the ses	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principle vegetables Advances in food process technology aims to develop the knowledge of students in the area of opplied to foodprocessing.	ples in the 3
and the r 2. T p 2. Objective processing 2.The processing 3. Objective oralterna 2.This of	related technologyus This course will ena rackaging offoods. FT-303 Ves: 1. The course are and andtechnology. This course will enal ressing of fruits and FT-305 Ves: 1. The course are attive technologies appropriate to the course are attive technologies appropriate.	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principle vegetables Advances in food process technology aims to develop the knowledge of students in the area of	ples in the 3
2. The processing 2. This constraints are processing are proc	related technologyus This course will enabackaging offoods. FT-303 res: 1. The course are and andtechnology. This course will enable the sessing of fruits and ressing of fruits and ressing of the sessing of the ses	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principle vegetables Advances in food process technology aims to develop the knowledge of students in the area of opplied to foodprocessing.	ples in the 3 le and fruit ples in the 3 F emerging
and the r 2. T p 2. Objective processin 2.Th processin 3. Objective oralterna 2.This of existingt	related technologyus This course will enable ackaging offoods. FT-303 ves: 1. The course and another ackaging of fruits and tessing of fruits and tessin	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principle vegetables Advances in food process technology aims to develop the knowledge of students in the area of opplied to foodprocessing. e students to understand the advantages and disadvant	ples in the 3
and the r 2. T p 2. Objective processing 2.Th processing 3. Objective oralterna 2.This of existingt 4.	related technologyus This course will enable echnologies. FT-303 ves: 1. The course and and technology. This course will enable echnologies appropriate will enable echnologies. ME-309	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principle vegetables Advances in food process technology aims to develop the knowledge of students in the area of opplied to foodprocessing. e students to understand the advantages and disadvant the development of the students of	ples in the 3 le and fruit ples in the 3 f emerging ages over
and the r 2. T p 2. Objective processing 2.Th processing 3. Objective oralterna 2.This of existingt 4. Objective frying, f	related technologyus This course will enable ackaging offoods. FT-303 ves: 1. The course and and and technology. This course will enable accourse will enable accourse will enable echnologies. ME-309 ves: Heat transfer i	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principle vegetables Advances in food process technology aims to develop the knowledge of students in the area of opplied to foodprocessing. e students to understand the advantages and disadvant	ples in the 3 ble and fruit ples in the 3 c emerging cages over
and the r 2. T p 2. Objective processin 2. The processin 2. The processin 2. The processin 4. Objective 4. Objective	related technologyus This course will enable ackaging offoods. FT-303 ves: 1. The course and and and technology. This course will enable accourse will enable accourse will enable echnologies. ME-309 ves: Heat transfer i	Fruit and Vegetable Processing ims to develop the knowledge of students in the area of vegetable students to appreciate the application of scientific principle vegetables Advances in food process technology aims to develop the knowledge of students in the area of applied to foodprocessing. e students to understand the advantages and disadvant the develop the knowledge of students in the area of applied to foodprocessing. Heat and Mass transfer (HMT) In food processing is simultaneous heat and mass transfer in	ples in the 3 ble and fruit ples in the 3 c emerging cages over

the analys	sis of foods		
		Generic Elective IV	
		EntrepreneurshipDevelopment	
		n diversification and commercialization of agriculture, enh	ances shelf
life, ensu	res value addition to agro		T
Objective	age the number of restor	FoodAdditives ing nutrients lost or degraded during production, fortifying of	n anniahina
certain fo			T emicining
		Entrepreneurship Development in Agri-and Allied- Sectors	
		role in diversification and commercialization of agriculture	e, enhances
shelf	life, ensures value additi		
011		Rural Management	
		namic food processing sector plays a vital role in reduc	tion in the
wastaş	ge of perishable agricultu	PRACTICALS	
1.	FT-353	Food packaging and Food QualityLab	
	FT-355		2
2.	Γ1-333	Fruit, Vegetableand Milk Products Processing Lab	2
3.		Total	
		Semester- VI	
1.	FT- 302	Technology Of Cereals, Pulses	3
1.	11 302	And Oilseeds	
Objective	ng. 1 The course sime to	develop the knowledge of students in the area of pulse and of	il sood
		develop the knowledge of students in the area of pulse and t	III Seeu
_	g andtechnology.		
	•	understanding specific aspects of food processing related t	
foods. Th	nis course will enable st	udents to appreciate the application of scientific principles	in the
processin	g of thesematerials.		
2.	FT- 304	Food Texture and Rheology	3
	•	oncepts of food rheology and foodtexture.	
		of foods and measuringmethods.	
2. 10 dep	ict meological properties	of foods and measuringmethods.	
3.	FT-306	Plantation Products and Spices Technology	3
Objective	es: 1.Coffee and its proce	essing techniques, instant coffee, and qualitygrading	
2.	Differenttypesofteaandits	manufacturingtechniques,instanttea,qualityparametersoftea	
4.	ME-306	Refrigeration and Air	4
		conditioning	
Objective	es: The purpose of a re	frigeration system is to make understanding cooling	behavior of
	and products.		Τ.
5.	FT210	Discipline Specific Elective I	3
01: 4:	FT310	Technology of Fats andOils	1.0"
		o develop the knowledge of students in the area of Fat a	ind Oil
processin	g andtechnology.		

	ic nooccory tor ottoo		raicu io
thesefoo	•	ctive understanding specific aspects of food processing re-	
		udents to appreciate the application of scientific principles	c in the
		duents to appreciate the application of scientific principle	s iii uic
processi	ing of thesematerials		
	FT308	Food Process EquipmentDesign	
Objecti	ves: To understand the	construction requirements, process design, fabrication and ins	stallation
•		he knowledge in the design of food processing equipments.	
1 1			
	FT317	Entrepreneurship Development in Agri-and Allied Sectors	-
6.		Discipline Specific Elective II	3
	FT312	Food Processing WasteManagement	
Ohiecti		geofwastesandby-productsoffoodprocessing,theireffectsonthequ	ıality
-	•	ninimizetheproductionofwastesandfoodprocessingwaste manag	-
orenvire	Jiment, and measureston	minimizetheproductionorwastesandroodprocessingwaste manag	ement
	FT314	Technology of FrozenFood	
01: 4:			0 11
-	ves: 1.10 understand th	ne underlying principles of operation in different Refrigeration	n & cold
storage			
_	systems and itscompone	ents.	
-	•		
-	•	ents. on design aspects of cold storagesystems	
-	•		
Objecti	2.To provide knowledge FT318 ves:A strong and dynan	e on design aspects of cold storagesystems Rural Management mic food processing sector plays a vital role in reduction in th	e wastage o
Objecti	2.To provide knowledge FT318	Rural Management mic food processing sector plays a vital role in reduction in the	e wastage o
Ob <u>j</u> ecti	2.To provide knowledge FT318 ves:A strong and dynan	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS	e wastage of
Objecti perishal	2.To provide knowledge FT318 ves: A strong and dynamole agricultural produce FT- 352	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab	2
Objecti perishal	2.To provide knowledge FT318 ves:A strong and dynamole agricultural produce FT- 352 FT- 354	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab	2 2
Objecti perishal	2.To provide knowledge FT318 ves: A strong and dynamole agricultural produce FT- 352	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar	2
Objecti perishal	2.To provide knowledge FT318 Eves: A strong and dynamole agricultural produce FT- 352 FT- 354 FT-356	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit	2 2 2
Objecti perishal	2.To provide knowledge FT318 Eves: A strong and dynamole agricultural produce FT- 352 FT- 354 FT-356	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar	2 2 2
Objecti perishal 1. 2. 3.	FT318 ves: A strong and dynamole agricultural produce FT- 352 FT- 354 FT-356 FT-316	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology	2 2 2 1
Objecti perishal 1. 2. 3.	2.To provide knowledge FT318 Ives: A strong and dynamole agricultural produce FT- 352 FT- 354 FT-356 FT-316 FT-401 ctives: 1.Familiarizewit	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII	2
Objecti perishal 1. 2. 3.	2.To provide knowledge FT318 Ives: A strong and dynamole agricultural produce FT- 352 FT- 354 FT-356 FT-316 FT-401 ctives: 1.Familiarizewit	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology ththecommercialmethodsofbakingbreadandrecentadvancesinbatects of bakery products, sanitation and hygiene of bakingindus	2
Objecti perishal 1. 2. 3. Obje 2. Le	FT318 ves: A strong and dynamole agricultural produce FT- 352 FT- 354 FT-356 FT-316 FT-401 ctives: 1.Familiarizewitarn microbiological asper	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology ththecommercialmethodsofbakingbreadandrecentadvancesinbatects of bakery products, sanitation and hygiene of bakingindus Food Storage Engineering	2 2 2 1 3 keryindustry tries.
Objecti 1. 2. 3. Obje 2. Le	FT318 Eves: A strong and dynamical agricultural produce FT- 352 FT- 354 FT-356 FT-316 FT-401 Ctives: 1.Familiarizewith arn microbiological aspectives: 1.The course aims are series at the course aims are series.	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology ththecommercialmethodsofbakingbreadandrecentadvancesinbatects of bakery products, sanitation and hygiene of bakingindus	2 2 2 1 3 keryindustry tries.
Objecti 1. 2. 3. Obje 2. Le	FT318 Ives: A strong and dynamole agricultural produce FT- 352 FT- 354 FT-356 FT-316 FT-401 ctives: 1.Familiarizewith arn microbiological aspensis is necessary for effectives:	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology ththecommercialmethodsofbakingbreadandrecentadvancesinbatects of bakery products, sanitation and hygiene of bakingindus Food Storage Engineering to develop the knowledge of students in the area of Foodstorage cive understanding specific aspects of foodstorage	2 2 2 1 3 keryindustry tries.
Objecti 2. Th	FT-352 FT-354 FT-356 FT-316 FT-401 ctives: 1.Familiarizewit arn microbiological asponsis is necessary for effectives: FT-405	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology ththecommercialmethodsofbakingbreadandrecentadvancesinbatects of bakery products, sanitation and hygiene of bakingindus Food Storage Engineering to develop the knowledge of students in the area of Foodstorage ctive understanding specific aspects of foodstorage Dairy process technology	2
Objecti 2. 3. Obje 2. Le Objecti 2.Th	FT-352 FT-354 FT-356 FT-316 FT-401 ctives: 1.Familiarizewit arn microbiological asponsis is necessary for effectives: Tointroducethestud	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology ththecommercialmethodsofbakingbreadandrecentadvancesinbatects of bakery products, sanitation and hygiene of bakingindus Food Storage Engineering to develop the knowledge of students in the area of Foodstorage crive understanding specific aspects of foodstorage Dairy process technology dentstodairyindustry,propertiesandprocessingofmilk,manufacture	2
Objecti Objecti Objecti Objecti Objecti	FT-352 FT-354 FT-356 FT-316 FT-401 ctives: 1.Familiarizewit arn microbiological asponsis is necessary for effectives: Tointroducethestud	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology ththecommercialmethodsofbakingbreadandrecentadvancesinbatects of bakery products, sanitation and hygiene of bakingindus Food Storage Engineering to develop the knowledge of students in the area of Foodstorage ctive understanding specific aspects of foodstorage Dairy process technology	2
Objecti Objecti Objecti Objecti Objecti	FT-352 FT-354 FT-356 FT-316 FT-401 ctives: 1.Familiarizewit arn microbiological asponsis is necessary for effectives: Tointroducethestud	Rural Management mic food processing sector plays a vital role in reduction in the PRACTICALS Cereal and Pulse Processing Lab Food Engineering Lab Seminar Industry Visit/Academic Visit/Village SiteVisit Semester- VII Bakery and Confectionary Technology ththecommercialmethodsofbakingbreadandrecentadvancesinbatects of bakery products, sanitation and hygiene of bakingindus Food Storage Engineering to develop the knowledge of students in the area of Foodstorage crive understanding specific aspects of foodstorage Dairy process technology dentstodairyindustry,propertiesandprocessingofmilk,manufacture	2

Objectives: 1.To understand the concept of basic fermentation processes and its control systemsetc. 2.To help students acquire a sound knowledge on diversities of foods, food habits and patterns in India with focus on traditional foods. FT- 417 3 Food Safety, Quality and Regulation **Objectives:** 1. To characterize different type of food hazards, physical, chemical and biological in the industry and food serviceestablishments 2.To help become skilled in systems for food safetysurveillance 3.To be aware of the regulatory and statutory bodies in India and theworld Discipline Specific Elective III 3 Food DehydrationTechnology FT-409 **Objectives:** To explain the dehydration, drying curve, freeze-drying and equipments required for carrying out these operations. Meat Fish Poultry ProcessingTechnology FT411 **Objectives:** 1. The course aims to develop the knowledge of students in the area of animal product processing andtechnology. 2. This course will enable students to appreciate the application of scientific principles in the processing of thesematerials. Generic Elective 3 FT 413 Functional Foods and Nutraceuticals **Objectives:** 1.To understand the basic concepts of nutraceuticals and functional food. 2.To understand the role of nutraceuticals and functional food in human health. FlavourTechnology FT415 **Objectives:** 1. To understand the flavour compounds involved in development offlavor 2.To understand the analytical techniques involved in flavoranalysis **PRACTICALS** FT-451 Advance Food Processing Lab 2 FT-453 *Training FT- 455 Project I 4 GP General Proficiency 0 31 Total **Semester-** VIII FT-454 Project II **Objectives:** The main objective of the dissertation work is to enhance practical and professional skills of the students thus providing an edge over others in finding desired professional roles and career advancement (Open elective) OE4 MOOCS 03 courses/

Seminar/Workshop/	
Research Ethics/	
Area Specific case	
study	

Objectives: Students can choose according to their choice subjects and can also take other subject other than subjects

<u>PROGRAMME-</u> POST GRADUATE DIPLOMA IN FOOD SAFETY AND QUALITY MANAGEMENT (FSQM)

PROGRAMME OBJECTIVE

To promote excellence in learners for managing quality and safety of food, using latest knowledge, national and international food laws and practices of Food quality management.

	Semester- I					
1	FQD-401	Food Chemistry and Analysis	4			
of Food C	Objectives: 1. The course aims to develop the knowledge of students in the basic area of Food Chemistry. 2. This is necessary for effective understanding of food processing and technology					
2	FQD-403	Food Microbiology	4			
Objectiv	es: 1.To provid	le awareness about nutrition and growth ofm	icroorganisms.			
2. To impart knowledge about role of microorganisms in air, water andsoil.						
3. To understand the role of microorganisms in fermented foods, food						
spoilage, food infections andintoxications.						
3	PGD-405	Food Laws and Standards	4			
Objectives: 1.To characterize different type of food standard.						

4	FQD-409	Principles of Food Safety and Quality Management	4		
Objectives: 1.To characterize different type of food hazards, physical, chemical and biological in theindustryandfoodserviceestablishments					
		insystemsforfoodsafetysurveillance	innents		
5	BS 101	Human Values &Buddhist Ethics	2		
Objec	ctives: To acco	ount of the moral prescriptions, norms and va or group	alues of a community		
1	FQD-411	Food Microbiology Lab	4		
	-				
2	FQD-413	Chemical Analysis and Quality Assurance	4		
		Semester II			
	FQD-402	Methods of Food analysis & Sampling	4		
Objecti		the basic principles of the analytical procedumalyze foods and to discuss their application			
	FQD-404	Food Safety and Quality Auditing	4		
Obj	Objectives: To know about Audits, crucial component of maintaining food safety standards and certification				
	FQD-406	Seminar	1		
	Objectives: T	To make students how to deliver oral lectures	and speech.		
	FQD-408	Industrial Visit/Academic Visit/Field Visit	2		
Objectives: To know about actual problems in site areas and how to controlled					
	FQD-410	Project Work and Viva Voce	8		
Objectives: To make them how to each student is required to carry out the work and submit the report individually.					

PROGRAMME- POST GRADUATE DIPLOMA IN FOOD SCIENCE & TECHNOLOGY (FST)

PROGRAMME OBJECTIVE

To develop professionals/entrepreneurs well equipped with the wise understanding of new product developments, and self-life enhancement.