



EXCEL ENGINEERING COLLEGE (Autonomous)

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NBA, NAAC with "A+" and Recognised by UGC (2f & 12B)
KOMARAPALAYAM - 637303

DEPARTMENT OF FOOD TECHNOLOGY REGULATION 2020 B.Tech. Food Technology Curriculum for Semesters – I to VIII

I SEMESTER									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Course(s)									
20MA101	Mathematics – I for Biosciences	BS	3	2	0	4	40	60	100
20EC103	Basics of Electrical and Electronics Engineering	ES	3	0	0	3	40	60	100
Theory with Practical Courses									
20ENEXX	Language Elective – I	HSS	2	0	2	3	50	50	100
20CH101	Chemistry for Biosciences	BS	3	0	2	4	50	50	100
20FT101	Introduction to Biochemistry and Nutrition	BS	3	0	2	4	50	50	100
20ME101	Engineering Graphics	ES	1	0	4	3	50	50	100
Mandatory Course									
20MC101	Induction Programme	MC	2 Weeks			0	100	0	100
TOTAL			15	2	10	21	330	370	700

Language Electives – I									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20ENE01	Communicative English	HSS	2	0	2	3	50	50	100
20ENE02	Advanced Communicative English	HSS	2	0	2	3	50	50	100

II SEMESTER									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Courses									
20MA201	Mathematics – II for Biosciences	BS	3	2	0	4	40	60	100
20FT201	Food Microbiology	BS	3	0	0	3	50	50	100
Theory with Practical Courses									
20ENEXX	Language Elective – II	HSS	2	0	2	3	50	50	100
20PH201	Physics for Biosciences	BS	3	0	2	4	50	50	100
20CS201	Problem Solving using Python	ES	3	0	2	4	50	50	100
Practical Courses									
20FT202	Food Practices Laboratory	BS	0	0	4	2	50	50	100
Mandatory Course									
20MC201	Environmental Sciences	MC	2	0	0	0	100	0	100
Total			16	2	10	20	340	360	700

Language Electives – II									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20ENE02	Advanced Communicative English	HSS	2	0	2	3	50	50	100
20ENE03	Hindi	HSS	2	0	2	3	50	50	100
20ENE04	French	HSS	2	0	2	3	50	50	100
20ENE05	German	HSS	2	0	2	3	50	50	100

III SEMESTER									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Courses									
20MA301	Transforms and Boundary Value Problems	BS	3	2	0	4	40	60	100
20FT301	Fundamentals of Food Processing	PC	3	2	0	4	40	60	100
20FT302	Food Thermodynamics	ES	3	0	0	3	40	60	100
20FT303	Food Process Calculation	ES	3	2	0	4	40	60	100
20FT304	Food Analysis	PC	3	0	0	3	40	60	100
20FT305	Food Chemistry and Nutrition	PC	3	0	0	3	40	60	100
Practical Courses									
20FT306	Food Analysis Laboratory	PC	0	0	2	1	50	50	100
20FT307	Food Chemistry Laboratory	PC	0	0	2	1	50	50	100
Mandatory Course									
20MC302	Interpersonal skills	MC	0	0	2	0	100	0	100
Total			18	4	6	23	390	510	900

IV SEMESTER									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Courses									
20MA403	Probability and Statistical Methods	BS	3	2	0	4	40	60	100
20FT401	Fundamentals of Fluid Mechanics	ES	3	0	0	3	40	60	100
20FT402	Unit Operations in Food Technology	ES	3	0	0	3	40	60	100
20FT403	Food Processing and Preservation	PC	3	2	0	4	40	60	100
20FT404	Food Additives	PC	3	0	0	3	40	60	100
20FT405	Food Refrigeration and Cold Chain Management	PC	3	2	0	4	40	60	100
Practical Courses									
20FT406	Unit Operations Laboratory	PC	0	0	2	1	50	50	100
20FT407	Food Processing and Preservation Laboratory	PC	0	0	2	1	50	50	100
Mandatory Course									
20MC401	Soft Skills	MC	2	0	0	0	100	0	100
Total			20	4	4	23	390	510	900

V SEMESTER									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Courses									
20FT501	Diary Processing Technology	PC	3	0	0	3	40	60	100
20FT502	Heat and Mass Transfer in Food Processing	PC	3	2	0	4	40	60	100
20FT503	Biochemical Engineering in Food Technology	PC	3	2	0	4	40	60	100
20FT504	Food Equipment Design	PC	3	2	0	4	40	60	100
20FTEXX	Professional Elective-I	PE	3	0	0	3	40	60	100
20YYOXX	Open Elective-I	OE	3	0	0	3	40	60	100
Practical Courses									
20FT505	Diary Processing Laboratory	PC	0	0	2	1	50	50	100
20FT506	Biochemical Engineering Laboratory	PC	0	0	2	1	50	50	100
Total			18	4	4	23	350	450	800

VI SEMESTER									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
Theory Courses									
20FT601	Baking and Confectionary Technology	PC	3	0	0	3	40	60	100
20FT602	Food Process Engineering and Economics	HSS	3	2	0	4	40	60	100
20FTEXX	Professional Elective-II	PE	3	0	0	3	40	60	100
20YYOXX	Open Elective-II	OE	3	0	0	3	40	60	100
Theory with Practical Courses									
20FT603	Fruits and Vegetable Processing Technology	PC	3	0	2	4	50	50	100
Practical Courses									
20FT604	Baking and Confectionary Technology Laboratory	PC	0	0	4	2	50	50	100
20FT605	Mini Project	EEC	0	0	4	2	50	50	100
20FT606	Internship	EEC	2 Weeks			1	50	50	100
Total			18	2	10	22	360	440	800

VII SEMESTER										
Code No.	Course	Category	Periods/Week			C	Maximum Marks			
			L	T	P		CA	FE	Total	
Theory Courses										
20FT701	Food Packing Materials Technology	PC	3	0	0	3	40	60	100	
20FT702	Food Quality and Safety Regulation	PC	3	0	0	3	40	60	100	
20FTEXX	Professional Elective-III	PE	3	0	0	3	40	60	100	
20FTEXX	Professional Elective-IV	PE	3	0	0	3	40	60	100	
20YYOXX	Open Elective-III	OE	3	0	0	3	40	60	100	
Practical Courses										
20FT703	Food Packing Materials Laboratory	PC	0	0	2	1	50	50	100	
20FT704	Design Project	EEC	0	0	4	2	50	50	100	
Total			18	2	4	18	350	450	700	

VIII SEMESTER										
Code No.	Course	Category	Periods/Week			C	Maximum Marks			
			L	T	P		CA	FE	Total	
Theory Courses										
20FTEXX	Professional Elective-V	PE	3	0	0	3	40	60	100	
20FTOXX	Professional Elective-VI	PE	3	0	0	3	40	60	100	
20FT801	Major Project	EEC	0	0	20	10	50	50	100	
Total			6	0	20	16	130	170	300	

OPEN ELECTIVE COURSES (For Other Branches)									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20FTO01	Analytical techniques	OE	3	0	0	3	40	60	100
20FTO02	Process Instrumentation and Control	OE	3	0	0	3	40	60	100
20FTO03	Intellectual Property Rights	OE	3	0	0	3	40	60	100
20FTO04	Process Economics and Industrial Management	OE	3	0	0	3	40	60	100
20FTO05	Product Development and Management	OE	3	0	0	3	40	60	100
20FTO06	Optimization Techniques in Product Development	OE	3	0	0	3	40	60	100
PROFESSIONAL ELECTIVES (PE)									
Stream – I (Food Processing Technology)									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20FTE01	Fat and Oil Processing Technology	PE	3	0	0	3	40	60	100
20FTE02	Meat and Fish Processing Technology	PE	3	0	0	3	40	60	100
20FTE03	Poultry and Husbandry Processing technology	PE	3	0	0	3	40	60	100
20FTE04	Cereals and Pulses Processing Technology	PE	3	0	0	3	40	60	100
20FTE05	Mushroom Processing Technology	PE	3	0	0	3	40	60	100
20FTE06	Emerging Technologies in Food Processing	PE	3	0	0	3	40	60	100
20FTE07	Beverage Processing Technology	PE	3	0	0	3	40	60	100
20FTE08	Enzyme Technology	PE	3	0	0	3	40	60	100
20FTE09	Protein Technology	PE	3	0	0	3	40	60	100
20FTE10	Ready to Eat Processing Technology	PE	3	0	0	3	40	60	100
Stream – II (Food Design Engineering)									
20FTE21	Food Process Equipment Design	PE	3	0	0	3	40	60	100
20FTE22	Food Storage Engineering	PE	3	0	0	3	40	60	100
20FTE23	Design and Formulation of Food	PE	3	0	0	3	40	60	100
20FTE24	Instrumentation and Process Control in Food Industry	PE	3	0	0	3	40	60	100
20FTE25	Food Plant Utilities and Services	PE	3	0	0	3	40	60	100

20FTE26	Food Packing Technology and Equipment	PE	3	0	0	3	40	60	100
20FTE27	Optimization Techniques in Food Engineering	PE	3	0	0	3	40	60	100
20FTE28	Food Plant Design and Layout	PE	3	0	0	3	40	60	100
20FTE29	Modeling and Simulation of Food Processes	PE	3	0	0	3	40	60	100
20FTE30	Material Science and Technology	PE	3	0	0	3	40	60	100
Stream – III (Advanced Food Technology)									
20FTE41	Applications of Renewable Energy in Food Processing	PE	3	0	0	3	40	60	100
20FTE42	ICT Application in Food Industry	PE	3	0	0	3	40	60	100
20FTE43	Microbial and Food Technology	PE	3	0	0	3	40	60	100
20FTE44	Application of Nanotechnology and Cryogenic in Food technology	PE	3	0	0	3	40	60	100
20FTE45	Milling technology	PE	3	0	0	3	40	60	100
20FTE46	Downstream Processing	PE	3	0	0	3	40	60	100
20FTE47	Creativity, Innovation and New Food Product Development	PE	3	0	0	3	40	60	100
20FTE48	Renewable Energy Technology	PE	3	0	0	3	40	60	100
20FTE49	Functional Foods & Nutraceuticals	PE	3	0	0	3	40	60	100
20FTE50	Instrumental Techniques in Food Analysis	PE	3	0	0	3	40	60	100

ONE CREDIT COURSES									
Code No.	Course	Category	Periods/Week			C	Maximum Marks		
			L	T	P		CA	FE	Total
20FTA01	Interpersonal Skills	EEC	1	0	0	1	100	0	100
20FTA02	Analytical Skill	EEC	1	0	0	1	100	0	100
20FTA03	Value Education	EEC	1	0	0	1	100	0	100
20FTA04	Halal Compliance in Food Audit	EEC	1	0	0	1	100	0	100
20FTA05	Health Fitness	EEC	1	0	0	1	100	0	100
20FTA06	Social Psychology	EEC	1	0	0	1	100	0	100

CREDITS DISTRIBUTION – SEMESTER WISE

Passed in Board of studies Meeting on 22.10.2020

Approved in Academic Council Meeting on 06.11.2020

SI.No	Category	Credits per Semester								Total Credits	Credits in %	Total Credits (AICTE)
		I	II	III	IV	V	VI	VII	VIII			
1.	HSS	3	3				4			10 (10-14)	6.06%	11
2.	BS	12	13	4	4					33 (22-28)	20.00%	27
3.	ES	6	4	7	6					23 (24)	13.94%	15
4.	PC			12	13	17	9	7		58 (48)	35.15%	89
5.	PE					3	3	6	6	18 (18)	10.91%	18
6.	OE					3	3	3		9	5.45%	6
7.	EEC						2	2	10	14 (12-16)	8.48%	13
8.	MC	Non-Credit Courses								0	0.0%	0
Total		21	20	23	23	23	21	18	16	165	100%	179

HSS - Humanities and Social Sciences

BS - Basic Sciences

ES - Engineering Sciences

PC - Professional Core

PE - Professional Elective

OE - Open Elective

EEC - Employability Enhancement Course

MC - Mandatory Courses (Non-Credit Courses)

CA - Continuous Assessment

FE - Final Examination