

BIRLA INSTITUTE OF TECHNOLOGY- MESRA, RANCHI
NEW COURSE STRUCTURE - To be effective from academic session 2018- 19
Based on CBCS & OBE model
(B.Sc & Integrated M.Sc in Food Technology)

Semester/ Session of Study (Recommended)	LEVEL	Category of course	Course Code	Courses	Mode of delivery & credits L-Lecture; T-Tutorial;P-Practicals			Total Credits C- Credits	
					L (Periods/ week)	T (Periods/ week)	P (Periods/ week)	C	
THEORY									
FIRST Monsoon	FIRST	BS	PH 113	Physics	3	1	0	4	
			MA 103	Mathematics I	3	1	0	4	
			CS 101	Programming for problem solving	3	1	0	4	
			MT 123	Business communication	2	0	2	3	
	LABORATORY								
	FIRST	BS	PH114	Physics Lab	0	0	3	1.5	
			CS 102	Programming for problem solving Lab	0	0	3	1.5	
			GE	Workshop Practises	0	0	3	1.5	
			MC 101/102/103/104	NCC/ NSS/PT & Games/ Creative Arts				1	
	TOTAL								
20.5									
THEORY									
SECOND Spring	FIRST	BS	CE101	Environmental Science	2	0	0	2	
			CH 101	Chemistry	3	1	0	4	
			MA 107	Mathematics II	3	1	0	4	
	SECOND	PC	BE 203	Microbiology	3	0	0	3	
	FIRST	GE	EC 101	Basic Electronics Engg	3	0	0	3	
	LABORATORY								
	SECOND	PC	BE 201	Microbiology Lab	0	0	3	1.5	
	FIRST	BS	CH 102	Chemistry Lab	0	0	3	1.5	
			GE	EC 102	Electronics and Communication Lab	0	0	3	1.5
			MC 105/106/107/108	NCC/ NSS/PT & Games/ Creative Arts				1	
TOTAL									
21.5									
THEORY									
THIRD Monsoon	SECOND	PC	FT201	Food Chemistry	4	0	0	4	
			FT 202	Food Engineering-I	3	1	0	4	
			FT 203	Food Microbiology	4	0	0	4	
			FT204	Food Processing & Preservation Technology	4	0	0	4	
	LABORATORY								
	SECOND	PC	FT 205	Food Chemistry Lab	0	0	4	2	
			FT206	Food Microbiology Lab	0	0	4	2	
			MC 201/202/203/204	NCC/ NSS/PT & Games/Creative Art				1	
	TOTAL								
	21								
THEORY									
FOURTH Spring	SECOND	PC	FT 207	Food Analysis	4	0	0	4	
			FT208	Food Biochemistry and Human nutrition	4	0	0	4	
			FT209	Food Process Tech-I	4	0	0	4	
			FT210	Food Engineering II	3	1	0	4	
			OE	Open Elective - I	3	0	0	3	
	LABORATORY								
	SECOND	PC	FT211	Food Processing Lab	0	0	4	2	
			FT212	Food Analysis Lab	0	0	4	2	
			GE	Engineering Graphics	0	0	4	2	
			MC 205/206/207/208	PT & Games/NCC/NSS/CA				1	
TOTAL									
26									

THEORY									
FIFTH Monsoon	THIRD	PC	FT301	Food Process Technology-II	4	0	0	4	
			FT302	Food Engineering-III	3	1	0	4	
			FT303	Food Process Technology-III	4	0	0	4	
		PE	Programme Elective-I	3	0	0	3		
		OE	Open Elective- II	3	0	0	3		
	LABORATORY								
	THIRD	PC	FT304	Cereal & Pulses Technology Lab	0	0	4	2	
			FT305	Food Engineering Lab	0	0	4	2	
		RP	Dissertation- I	0	0	10	5		
		SPT	FT307	Industrial Training 4 weeks				2	
TOTAL									
29									
THEORY									
SIXTH Spring	THIRD	PC	FT 308	Dairy Technology	4	0	0	4	
			FT309	Food Engineering -IV	3	1	0	4	
			FT310	Food Engineering - V	3	1	0	4	
		PE	Programme Elective II	3	0	0	3		
		HSS	FT311	Food Business Management				3	
	LABORATORY								
	THIRD	PC	FT312	Dairy Technology Lab	0	0	3	1.5	
		PE	FT313	Product Development Lab	0	0	3	1.5	
		RP	FT350	Dissertation- II	0	0	12	6	
	TOTAL								
27									
TOTAL CREDIT FOR B.Sc. Honours (Food Technology)									
145									
I.M.Sc. Food Technology (Semester VII to X semester) /M.Sc. Food Technology (Semester I to IV Semester)									
THEORY									
M.Sc. (FIRST) / I.M.Sc. (SEVENTH) Monsoon	FOURTH	PC	FT 401	Food Packaging Technology	3	1	0	4	
			FT 402	Food Laws Safety and Quality	3	1	0	4	
			FT 403	Advanced Food Chemistry and Microbiology	3	1	0	4	
			FT 404	Fats and Oils Technology	3	1	0	4	
	SECOND	BS For Lateral Entry	FT 201	Food Chemistry	3	0	0	-	
			FT 203	Food Microbiology	3	0	0	-	
			OE	Open Elective I	3	0	0	3	
	HSS	MT 204	Constitution of India	2	0	0	Non Credit		
	LABORATORY								
	FOURTH	PC	FT407	Advanced Food Chemistry and Microbiology Lab	0	0	6	3	
FT409			Advanced Food Processing Lab	0	0	4	2		
TOTAL									
24									
THEORY									
M.Sc. (SECOND) / I.M.Sc. (EIGHTH) Spring	FOURTH	PC	FT410	Novel Techniques in Food Processing and Packaging	3	1	0	4	
			FT411	Food Product Development and Consumer Science	3	1	0	4	
		PE		Programme Elective III	3	0	0	3	
				Programme Elective IV	3	0	0	3	
		OE Lateral Entry		Open Elective II	3	0	0	3	
			FT413	Introduction of Programming and Data Structure	3	0	0	Non Credit	
	LABORATORY								
	FOURTH	PC	FT414	Advanced Food Analysis Lab	0	0	6	3	
			FT415	Advanced Food Processing Lab	0	0	4	2	
	TOTAL								
22									

THEORY								
M.Sc. (THIRD) / I.M.Sc. (NINTH) Monsoon	FIFTH	PC	FT501	Flavour Chemistry and Technology	3	1	0	4
			FT502	Food Processing Plant Engineering	3	1	0	4
			FT503	Applied Statistics for Food Technology	3	1	0	4
	PE		Programme Elective V	3	0	0	3	
			Programme Elective VI	3	0	0	3	
	LABORATORY							
FIFTH	PC	FT504	Advanced Food Processing Lab II	0	0	4	2	
		FT505	Food Product Development Lab	0	0	4	2	
TOTAL								22
M.Sc. (FOURTH) / I.M.Sc. (TENTH) Spring								
FIFTH	RP	FT500	Dissertation	3	0	0	12	
TOTAL								12
TOTAL CREDIT [I-IV SEMESTER]								80
Note:			* Open elective will be offered by other department, course code and LTP			** Program Elective will be offered by		

I.M.Sc. Food Technology (Semester VII to X semester) /M.Sc. Food Technology (Semester I to IV Semester)

Grand Total for I.M.Sc.(Semester I to Semester X)=(145+80)=225

**DEPARTMENT OF CHEMICAL ENGINEERING
PROGRAMME ELECTIVES (PE)
OFFERED FOR LEVEL 1-4**

PE / LEVEL		Code no.	Name of the PE courses	Prerequisites courses with code	L	T	P	C
3	PE 1	FT320	Food Additives & Ingredients	FT 201	3	0	0	3
3		FT321	Flavour Chemistry Technology	FT 201	3	0	0	3
3	PE 2	FT330	Food Packaging Technology	FT202	3	0	0	3
3		FT331	Food Industry Waste Management	FT 201, FT 202 , BS 203	3	0	0	3
3		FT332	Technology of Plantation Crops	FT 201	3	0	0	3
4	PE 3	FT420	Principles of Food Processing and Preservation	FT 201, FT 203	3	0	0	3
4		FT421	Automation in Food Processing Industry	FT 201, FT 203	3	0	0	3
4		FT422	Enzymes in Food Processing	FT 201, FT 203	3	0	0	3
4	PE 4	FT423	Food Processing Technology	FT 201, FT 203	3	0	0	3
4		FT424	Food Laws, Standards and Regulations	FT 201, FT 203	3	0	0	3
4		FT425	Food Supply Chain Management	FT 201, FT 203	3	0	0	3
5	PE 5	FT511	Bakery and confectionary	FT 201, FT 203	3	0	0	3
5		FT512	Food Biotechnology	FT 201, FT 203	3	0	0	3
5		FT513	Grain Storage Technology	FT 201, FT 203	3	0	0	3
5	PE 6	FT514	Plantation crops, spices, and condiments Technology	FT 201, FT 203	3	0	0	3
5		FT515	Food plant and equipment design	FT 201, FT 203	3	0	0	3
5		FT516	Computer application in food industry	FT 201, FT 203	3	0	0	3

**** PROGRAMME ELECTIVES TO BE OPTED ONLY BY THE FOOD TECHNOLOGY STUDENTS**

* Department of Chemical Engineering does not offer open elective for the students of other departments