

**Maulana Abul Kalam Azad University of Technology, West Bengal**  
*(Formerly West Bengal University of Technology)*  
**Syllabus for B. Tech in Food Technology**  
 (Applicable from the academic session 2018-2019)

**Curriculum Structure**  
**Semester III [Second year]**

Sl. No.	Category	Subject Code	Subject Name	Total Number of contact hours			Credits
				L	T	P	
<b>Theory</b>							
1.	Basic Science Course	BS-FT 301	Chemistry-II	3	0	0	3
2.	Engineering Science Course	ES-FT 301	Engineering Thermodynamics	3	0	0	3
3.	Engineering Science Course	ES-FT 302	Unit Operation –I (Mechanical Operations and Separation Process)	3	1	0	4
4.	Professional Core courses	PC-FT 301	Chemistry of Food	3	1	0	4
5.	Professional Core courses	PC-FT 302	Food Microbiology	3	1	0	4
6	Basic Science Course	BS-FT 302	Biology for Engineers	3	0	0	3
	Total Theory			18	3	0	21
<b>Practical</b>							
2.	Professional Core courses	PC-FT 391	Chemistry of Food Lab	0	0	3	1.5
3.	Professional Core courses	PC-FT 392	Microbiology of Food Lab	0	0	3	1.5
	Total Practical			0	0	6	3
	<b>Total of 3<sup>rd</sup> Semester</b>			<b>18</b>	<b>2</b>	<b>6</b>	<b>24</b>

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**Semester IV [Second year]**

Sl. No.	Category	Subject Code	Subject Name	Total Number of contact hours			Credits
				L	T	P	
<b>Theory</b>							
1.	Engineering Science Course	ES-FT 401	Unit Operation –II (Transfer Processes)	3	0	0	3
2.	Professional Core courses	PC-FT 401	Biochemistry & Nutrition	3	1	0	4
3.	Professional Core courses	PC-FT 402	Principles of Food Preservation	3	1	0	4
4.	Basic Science Courses	BS-FT 401	Numerical Methods & Statistical Techniques	2	0	0	2
5.	Humanities And Social Sciences Including Management Courses	HU-FT 401	Professional Ethics & IPR	2	0	0	2
6.	Mandatory non-credit course	MC-401	Slot for MC [Environmental sciences]	3	-	-	0
Total Theory				13	2	0	15
<b>Practical</b>							
1.	Engineering Science Course	ES-FT 491	Unit Operation Lab	0	0	3	1.5
2.	Professional Core courses	ES-FT 492	Biochemistry Lab	0	0	3	1.5
3.	Basic Science Courses	BS-FT 491	Numerical Methods Lab	0	0	2	1
Total Practical				0	0	8	4
<b>Total of 4<sup>th</sup> Semester</b>				<b>13</b>	<b>2</b>	<b>8</b>	<b>19</b>

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**Semester V [Third year]**

Sl. No.	Category	Subject Code	Subject Name	Total Number of contact hours			Credits
				L	T	P	
<b>Theory</b>							
1.	Professional Core courses	PC-FT 501	Food process technology – I (cereals, pulses, fruits, vegetables, spices, tea, coffee & beverages)	3	1	0	4
2.	Professional Core courses	PC-FT 502	Food process technology – II (fish, meat, poultry)	3	0	0	3
3.	Professional Core courses	PC-FT 503	Food process engineering	3	0	0	3
4.	Professional Elective courses	PE-FT 501	Elective – I (Fermentation Technology & Biochemical Engineering/ Instrumental Methods of Food Analysis)	3	0	0	3
5.	Open Elective courses	OE-FT 501	Open Elective – I (Process Instrumentation & Control/Renewable Energy Technology/ Mechanotrics)	3	0	0	3
6.	Humanities And Social Sciences Including Management Courses	HS-FT 501	HASS-III (Engineering Economics)	3	0	0	3
7.	Mandatory course	MC	Slot for MC [Constitution of India/ Essence of Indian Knowledge Tradition]	-	-	-	-
Total Theory				18	1	0	19
<b>Practical</b>							
1.	Professional Core courses	PC-FT 591	Food Engineering Lab	0	0	3	1.5
2.	Professional Core courses	PC-FT 592	Food Analysis & Quality Control Lab-I	0	0	3	1.5
Total Practical				0	0	6	3
<b>Total of 5<sup>th</sup> Semester</b>				<b>18</b>	<b>1</b>	<b>6</b>	<b>22</b>

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**Semester VI [Third year]**

Sl. No.	Category	Subject Code	Subject Name	Total Number of contact hours			Credits
				L	T	P	
<b>Theory</b>							
1.	Professional Core courses	PC-FT 601	Food process technology – III (milk and milk products)	3	0	0	3
2.	Professional Core courses	PC-FT 602	Food process technology – IV (edible fats and oils)	3	0	0	3
3.	Professional Core courses	PC-FT 603	Food process technology – V (bakery, confectionary and extruded foods)	3	0	0	3
4.	Humanities And Social Sciences Including Management Courses	HS-FT 601	HASS-IV (Principles of Management)	3	0	0	3
5.	Professional Elective courses	PE-FT 601	Elective – II(Enzyme Technology/ Plant Maintenance, Safety & Hygiene/ Food additives)	3	0	0	3
6.	Open Elective courses	OE-FT 601	Open Elective – II (Data Structure & Algorithm/DBMS)	2	0	0	2
Total Theory				17	0	0	17
<b>Practical</b>							
1.	Professional Core courses	PC-FT 691	Food Processing Lab	0	0	3	1.5
2.	Professional Core courses	PC-FT 692	Food Analysis & Quality Control lab-II	0	0	3	1.5
3.	Open Elective courses	OE-FT 691	Data Structure & Algorithm Lab/DBMS Lab	0	0	2	1
Total Practical				0	0	8	4
<b>Total of 6<sup>th</sup> Semester</b>				<b>17</b>	<b>0</b>	<b>8</b>	<b>21</b>

<b>Students undergo Summer Internship for a period of 6 weeks.</b>	<b>3 credits</b>
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**Semester VII [Fourth year]**

Sl. No.	Category	Subject Code	Subject Name	Total Number of contact hours			Credits
				L	T	P	
<b>Theory</b>							
1.	Professional Core courses	PC-FT 701	Food Packaging Technology	3	0	0	3
2.	Professional Core courses	PC-FT 702	Food Safety & Quality Management	3	0	0	3
3.	Professional Elective courses	PE-FT 701	Elective – III (Management & Value Addition of Food Industry Wastes/ Nutraceuticals & Functional Foods/ Modeling & Simulation of Food Processes)	3	0	0	3
4.	Professional Elective courses	PE-FT 702	Elective – IV (Project Engineering & Food Plant Layout/ Food Toxicology/ Food Security & Sustainability)	3	0	0	3
5.	Open Elective courses	OE-FT 701	Open Elective – III (Entrepreneurship Development for Food Technologists/Supply Chain Management & Food Marketing / Smart Technology)	3	0	0	3
6.	Open Elective courses	OE-FT 702	Open Elective – IV (Nanoscience in food Technology/ Cryogenics/ Flavor Technology)	3	0	0	3
	Total Theory			18	0	0	18
<b>Practical</b>							
1.	Professional Core courses	PC-FT 791	Product development & quality assurance lab	0	0	6	3
	Total Practical			0	0	6	3
	<b>Total of 7<sup>th</sup> Semester</b>			<b>18</b>	<b>2</b>	<b>6</b>	<b>21</b>

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**Semester VIII [Fourth year]**

Sl. No.	Category	Subject Code	Subject Name	Total Number of contact hours			Credits
				L	T	P	
1.	Summer Industry Internship Project	P-881	Project	-	-	-	12
<b>Total of 8<sup>th</sup> Semester</b>				-	-	-	<b>12</b>