

**SYLLABUS**  
**B.Tech. (Food Engg. and Technology)**

**Semester I**

No.	Subjects	Hours/week (L + T)	Marks	Credits
1	Inorganic Chemistry	2+1	50	3
2	Organic Chemistry-I	3+1	100	4
3	Applied Mathematics-I	2+2	100	4
4	Applied Physics-I	3+1	100	4
	<b>TOTAL</b>	<b>15</b>	<b>350</b>	<b>15</b>
5	Engineering Graphics-I	8	100	4
6	Physics Laboratory	4	50	2
7	Inorganic Chemistry Laboratory	4	50	2
8	Organic Chemistry Laboratory	4	50	2
	<b>Total Practicals</b>	<b>20</b>	<b>250</b>	<b>10</b>
		<b>35</b>	<b>600</b>	<b>25</b>

**Semester II**

No.	Subjects	Hours/week (L + T)	Marks	Credits
1	Organic Chemistry-II	3+1	100	4
2	Analytical Chemistry	2+1	50	3
3	Material & Energy Balance Calculations	2+2	100	4
4	Applied Mathematics-II	2+2	100	4
5	Applied Physics-II	2+1	50	3
	<b>TOTAL</b>	<b>18</b>	<b>400</b>	<b>18</b>
6	Engineering Applications of Computers	4	50	2
7	Organic Chemistry Laboratory	4	50	2
8	Analytical Chemistry Laboratory	4	50	2
9	Communication Skills	4	50	2
	<b>Total practicals</b>	<b>16</b>	<b>200</b>	<b>8</b>
		<b>34</b>	<b>600</b>	<b>26</b>

**Semester III**

No.	Subject code	Subjects	Hours/week (L + T)	Marks	Credits
1		Engineering Mechanics and Strength of Materials	2+1	50	3
2		Electrical and Electronics Engineering*	2+1	50	3
3		Physical Chemistry	3+1	100	4
4	FDT 1011	Spl 1: Chemistry of Food Constituents	3+1	100	4

5	By Bioenergy centre	Spl 2: General Microbiology	2+1	50	3 (AML)
6	By Bioenergy centre	Spl 3: Biochemistry	2+1	50	3 (AML)
		<b>TOTAL</b>	<b>14</b>	<b>300</b>	<b>14</b>
5		Electrical and Electronics Engineering Laboratory	4	50	2
6		Physical Chemistry Laboratory	4	50	2
7	FDP 1011	Pr1: Technical Analysis – I	4	50	2
		<b>Total Practicals</b>	<b>12</b>	<b>150</b>	<b>6</b>
			<b>26</b>	<b>450</b>	<b>20</b>

#### Semester IV

No.	Subject Code	Subjects	Hours/week (L + T)	Marks	Credits
1		Transport Phenomena	3+1	100	4
2	FDT 1012	Spl 4: Food Additives and Ingredients	3+1	100	4
3	FDT 1013	Spl 5: Food Chemistry	3+1	100	4
4	FDT 1014	Spl 6: Food Microbiology	2+1	50	3
5	FDT 1015	Spl 7: Nutrition	2+1	50	3
		<b>TOTAL</b>	<b>18</b>	<b>400</b>	<b>18</b>
6	FDP 1012	Pr 2: Technical Analysis – II	4	50	2
7	FDP 1013	Pr 3: Microbiology Lab – I	4	50	2
8	FDP 1014	Pr 4: Biochemistry Lab – I	4	50	2
		<b>Total Practicals</b>	<b>4</b>	<b>50</b>	<b>2</b>
			<b>22</b>	<b>450</b>	<b>20</b>

#### Semester V

No.	Subject Code	Subjects	Hours/week (L + T)	Marks	Credits
1		Chemical Engineering Operations	2+1	50	3
2		Chemical Reaction Engineering	2+1	50	3
3	FDT 1016	Spl 8: Fermentation Technology	2+1	50	3
4	FDT 1017	Spl 9: Technology of Fruits, Vegetables and Tubers	2+1	50	3
5	FDT 1018	Spl 10: Technology of Meat, Fish and Poultry	2+1	50	3
6	FDT 1019	Spl 11: Food Packaging	2+1	50	3
		<b>TOTAL</b>	<b>18</b>	<b>300</b>	<b>18</b>
7	FDP 1015	Pr 5: Food Chemistry Lab	8	100	4

8	FDP 1016	Pr 6:Microbiology Lab – II	4	50	2
9	FDP 1017	Pr 7: Biochemistry Lab – II	4	50	2
		<b>Total Practicals</b>	<b>8</b>	<b>100</b>	<b>4</b>
			<b>26</b>	<b>600</b>	<b>20</b>

### Semester VI

No.	Subject Code	Subjects	Hours/week (L + T)	Marks	Credits
1	FDT 1021	Spl 12: Principles of Food Preservation	3+1	100	4
2	FDT 1022	Spl 13 : Food Engineering	2+1	50	3
3	FDT 1023	Spl 14: Technology of Cereals, Legumes and Oilseeds	2+1	50	3
4	FDT 1024	Spl 15: Technology of Plantation Crops	2+1	50	3
5	FDT 1051	Elective-I : Nutraceuticals and functional foods	2+1	50	3
		<b>TOTAL</b>	<b>19</b>	<b>350</b>	<b>19</b>
6		Chemical Engineering Laboratory	4	50	2
7	FDP 1018	Pr 8: Analysis of Foods – I (Chemical)	8	100	4
8	FDP 1019	Pr 9:Food Processing – I	4	50	2
		<b>Total</b>	<b>16</b>	<b>200</b>	<b>8</b>
			<b>35</b>	<b>550</b>	<b>27</b>

In-Plant Training: 50 marks/2 credits

### Semester VII

No.	Subject Code	Subjects	Hours/week (L + T)	Marks	Credits
1		Food Project Economics (common)	2+1	50	3
2		Industrial Psychology and Human Resource Management (common)	2+1	50	3
3	FDT 1025	Spl 16: Chemistry and Technology of Milk and Dairy Products	2+1	50	3
4	FDT 1026	Spl 17: Food Biotechnology	2+1	50	3
5	FDT 1027	Spl 18: Food Process Engineering	2+1	50	3
6	FDT 1052	Elective- II: Principles of Food Analysis	2+1	50	3
		<b>TOTAL</b>	<b>18</b>	<b>300</b>	<b>18</b>
7	FDP 1020	Pr 10: Food Processing – II	8	100	4
8	FDP 1021	Pr 11: Analysis of Foods – II (Instrumental)	4	50	2
9	FDP 1022	Pr 12 Seminar (PRACTICAL 12)	4	50	2
		<b>Total Practicals</b>	<b>16</b>	<b>200</b>	<b>8</b>
			<b>34</b>	<b>500</b>	<b>26</b>

### Semester VIII

No.	Subject Code	Subjects	Hours/week (L + T)	Marks	Credits
1		Industrial Management	2+1	50	3
2		Value Education	2+1	50	3
3		Design and Analysis of Experiments	2+1	50	3
4	FDT 1028	Spl 20: Food safety, quality and regulations	2+1	50	3
5	FDT 1029	Current Topics in Food Science and Technology	2 +1	50	3
6	FDT 1053	Elective III : Waste Management in Food Processing	2+1	50	3
		<b>TOTAL</b>	<b>18</b>	<b>300</b>	<b>18</b>
7	FDP 1023	Pr13: Food Processing – III	4	50	2
8	FDP 1024	Experimental Project	12	150	6
		<b>Total</b>	<b>16</b>	<b>200</b>	<b>8</b>
			<b>34</b>	<b>500</b>	<b>26</b>

Electives to be offered by Food Engineering and Technology Department and their prerequisite

S. No.	Elective	Prerequisite
1	Nutraceuticals and functional foods (Sem VI)	Nil
2	Principles of Food Analysis (Sem VII)	Nil
3	Waste Management in Food Processing (Sem VIII)	Nil