



## DEPARTMENT OF FOOD TECHNOLOGY

Date: 15.06.2022

### Minutes of Board of Studies Meeting

Board of Studies (BoS) meeting of B.Tech-Food Technology was conducted on 14 & 15 June 2022 in blended mode at Physically members joined at office of HoD Chemical Engineering and two member joined meeting virtually through the following link:

<https://us06web.zoom.us/j/82145784421?pwd=VHhc3Y0lxlUzZzZDk0UFRuckZVTHdyUT09>

Meeting ID: 821 4578 4421 Passcode: 592570

#### **Agenda of the BoS Meeting:**

1. To Discuss and finalize the curriculum structure and detailed syllabus of B.Tech-Food Technology for the regulation 2022.
2. To approve the R22 curriculum and syllabus of B.Tech- Food Technology and recommend to the Academic council.

The following members were present either through offline or online.

S. No.	Name and designation	Position	Signature
1.	Dr. M. Ramesh Naidu	Chairperson	
2.	Dr. Ch. V.V. Satyanarayana	External Member (Academic)	
3.	Dr. Srinivas Maloo	External Member (Academic)	Online
4.	Dr. Payel Ghosh	Internal Member	
5.	Dr. Irshaan Sayed	Internal Member	
6.	Ms. Mohona Munshi	Internal Member	
7.	Mr. Sumit Gawai	Internal Member	
8.	Dr. T.V. Ramana Rao	Nominee (Dean, SNSAT)	
9.	Dr. Lavanya Devraj	Nominee (Dean, R&D)	
10.	Dr. Ashutosh Inamdar	Invitee	Online
11.	Mr. Prashant Bagade	Invitee	
12.	Dr. Dinkar B. Kamble	Member Secretary	

The following members have taken leave of absence:

Chairperson Dr. M. Ramesh Naidu Professor and Head, Department of Food Technology VFSTR opened the meeting by welcoming and introducing the external members, invitees to the internal members. Chairperson presented about the *NEP 2020 Compliant Regulation - R22* which emphasis on creating *learning centric* (continuous learning and continuous assessment model), offering B.Tech. B.Tech.with Honours/ Research Honours/ Minor/, Dual degree (B.Tech. + M.Tech./MBA, or M.Tech. + Ph.D.), providing multiple entry and multiple exits.

**The following points were discussed in the BoS meeting:**

1. Regulation R22 as per NEP-2020
2. Curriculum structure with credits, credits distribution.
3. 2 Modules instead of 5 units.
4. Assessment methods (Formative & Summative).
5. Grading Schemes.
6. Electives and streams/pools.
7. Minor degree courses and syllabus
8. Detailed course structure and syllabus
9. Honors Courses

**The following resolutions made after the discussion:**

1. BoS Members approved the revised regulations, curriculum structure, syllabus of B.Tech- Food Technology and it follows based on the NEP 2020. Curriculum structure is provided in Appendix-I.
2. Major restructuring has taken place in the curriculum which is oriented towards continuous learning and assessment based on Module structure.
3. Major reformation has taken place in the curriculum by offering Honours/Specialization degree and Minor degree in Food Processing Technology through 20 more credits with additional courses.
4. The curriculum is encompassing the courses that enable employability (Food business management, Food supply chain, etc.) or entrepreneurship (Project Planning Preparation and Management) or skill development (Food Chemistry, Food Microbiology) provided in Appendix- II.
5. The significant changes are made in the content of all courses and hence the courses are considered as new courses provided in Appendix- III.
6. Total average percentage of syllabus revised was 32% compared to previous curriculum.
7. The curriculum follows choice-based credit system.

Based on the suggestions given by the members, the Chairperson of BoS told that, those fruitful suggestions would be incorporated appropriately in the curriculum and syllabus of the regulation R22 and this will be recommended to the Academic Council of VFSTR for the approval.

There being no further points for discussion, the Chairperson thanks all the external, internal, invited members and announced that the meeting was adjourned.

  
Member Secretary

  
Chairperson

**VIGNAN'S**

Foundation for Science, Technology &amp; Research

(Deemed to be University)

-Established in 1982-2005

**DEPARTMENT OF FOOD TECHNOLOGY****APPENDIX I****B. Tech Food Technology: Curriculum Structure****I Year I Semester**

S. No.	Course Title	L	T	P	C	Remarks	Course Offered By
1.	Elementary Mathematics	3	2	0	4	Basic Sciences	Dept. of Math
2.	Food Biochemistry and Nutrition	2	-	2	3	Basic Sciences	Food Tech
3.	Basic of Electrical & Electronics Engineering	2	-	2	3	Basic Engineering	EEE
4.	IT Workshop and Food Engineering Products	1	-	4	3	Basic Engineering	FT
5.	Programming in C	2	-	4	4	Basic Engineering	T & P
6.	English Proficiency and Communication Skills.	-	-	2	1	Humanities	English
	<b>Total</b>	<b>10</b>	<b>2</b>	<b>14</b>	<b>18</b>		
7.	Physical Fitness, Sports & Games – I	-	-	3	1	Binary grade	PED
8.	Constitution of India	-	2	-	1	Binary grade	T & P
	<b>Total</b>	<b>10</b>	<b>4</b>	<b>17</b>	<b>20</b>		
	<b>Contact Hours</b>		<b>31</b>				

**I Year II Semester**

S. No.	Course Title	L	T	P	C	Remarks	Course Offered By
1.	Matrices and Calculus	3	2	0	4	Basic Sciences	Mathematics
2.	Applied Physics	2	-	2	3	Basic science	Physics
3.	Engineering Graphics	2	-	2	3	Basic Engineering	Mechanical
4.	Coding Competency (Basic)	-	1	3	2	Basic Engineering	T & P
5.	Technical English Communication	2	-	2	3	Humanities	English
6.	Food Chemistry	3	-	2	4	Professional core	FT
	<b>Total</b>	<b>12</b>	<b>3</b>	<b>11</b>	<b>19</b>		
7.	Physical Fitness, Sports & Games – II	-	-	3	1	Binary grade	DPE
	Orientation Session	-	-	6	3	Binary grade	
	<b>Total</b>	<b>12</b>	<b>3</b>	<b>20</b>	<b>23</b>		
	<b>Contact Hours</b>		<b>35</b>				

## II Year I Semester

S. No.	Course Title	L	T	P	C	Remarks	Course Offered By
1.	Probability and Statistics	3	2	-	4	Basic Sciences	Statistics
2.	Environmental Studies	1	1	-	1	Basic Sciences	Chemistry
3.	Data Structures	2	2	2	4	Basic Engineering	T & P
4.	Management Science	2	2	0	3	Humanities	Management
5.	Food Microbiology	3	-	2	4	Professional core	FT
6.	Principles of Food Preservation and Processing	3	-	2	4	Professional core	FT
7.	Engineering Thermodynamics	2	1	-	3	Professional core	FT
	<b>Total</b>	<b>16</b>	<b>8</b>	<b>6</b>	<b>23</b>		
	Life Skills	-	-	2	1	Binary grade	
	NCC/ NSS/ SAC/ E-cell/ Student Mentoring/ Social activities/ Publication with good impact factor (Only 2 students can claim 1 paper /patent). These credits maybe earned on or before the end of IV semester	-	-	-	1	Floating credits Binary grade	
	<b>Total</b>	<b>16</b>	<b>8</b>	<b>8</b>	<b>25</b>		
	<b>Contact Hours</b>	<b>32</b>					

## II Year II Semester

S. No.	Course Title	L	T	P	C	Remarks	Course Offered By
1.	Coding Competency (Advance)	-	-	2	1	Basic Engineering	T & P
2.	Professional Communication	-	-	2	1	Humanities	English
3.	Heat and Mass Transfer	2	1	2	4	Professional core	FT
4.	Fruits and Vegetables Processing	3	-	2	4	Professional core	FT
5.	Fundamentals of Fluid Mechanics	2	-	2	3	Professional core	FT
6.	Department Elective – 1	3	-	-	3	Department Elective	FT
7.	Open Elective – 2	3	-	-	3	Open Elective	-
	<b>Total</b>	<b>16</b>	<b>3</b>	<b>10</b>	<b>23</b>		
	Life Skills	-	-	2	1	Binary grade	
	<b>Total</b>	<b>16</b>	<b>1</b>	<b>12</b>	<b>21</b>		
	Minor/Honors-1	3	-	2	4		
	<b>Total</b>	<b>19</b>	<b>01</b>	<b>14</b>	<b>25</b>		
	<b>Contact Hours</b>	<b>34</b>					

### III Year I Semester

S. No.	Course Title	L	T	P	C	Remarks	Course Offered By
1.	Soft Skills Lab	-	-	2	1	Humanities	T & P
2.	Food Processing Operations	2	1	2	4	Professional core	FT
3.	Dairy Technology	3	-	2	4	Professional core	FT
4.	Cereals, Legumes, Oilseed Process Technology	3	-	2	4	Professional core	FT
5.	Department Elective – 2	3			3	Department Elective	FT
6.	Open Elective – 3	3			3	Open Elective	-
	Inter-Departmental Project / Course	-	-	2	-	Project	FT
	<b>Total</b>	<b>14</b>	<b>1</b>	<b>10</b>	<b>19</b>		
	Industry interface course (Modular course)	1			1	Binary Grades	FT
	NCC/ NSS/ SAC/ E-cell/ Student Mentoring/ Social activities/ Publication with good impact factor (Only 2 students can claim 1 paper /patent). These credits maybe earned on or before the end of VI semester				1	Floating credits Binary grade	
7.	<b>Minor / Honors – 2</b>	3		2	4		
	<b>Total</b>	<b>18</b>	<b>1</b>	<b>12</b>	<b>25</b>		
	<b>Contact Hours</b>	<b>31</b>					

### III Year II Semester

S. No.	Course Title	L	T	P	C	Remarks	Offered By
1.	Quantitative aptitude & Logical reasoning	1	2	-	2	Humanities	T & P
2.	Bakery and Confectionery Technology	3	-	2	4	Professional core	FT
3.	Food Packaging	2	-	2	3	Professional core	FT
4.	Department Elective – 3	3	-	-	3	Department Elective	FT
5.	Department Elective – 4	3	-	-	3	Department Elective	FT
6.	Open Elective – 3	3	-	-	3	Open Elective	-
7.	Inter-Departmental Project/Course	-	-	2	2	Project	FT
	<b>Total</b>	<b>15</b>	<b>2</b>	<b>6</b>	<b>20</b>		
	<b>Minor / Honors – 3</b>	3	-	2	4		
	<b>Total</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>24</b>		
	<b>Contact Hours</b>	<b>28</b>					

#### IV Year I Semester

S. No.	Course Title	L	T	P	C	Remarks	Course Offered By
1.	Food Safety and Quality Management	2	2	0	4	Professional core	FT
2.	Food Plant Layout and Equipment Design	2	2	0	4	Professional core	FT
3.	Department Elective – 5	3	-	-	3	Department Elective	FT
4.	Department Elective – 6	3	-	-	3	Department Elective	FT
5.	Department Elective – 7	3	-	-	3	Department Elective	FT
6.	Department Elective – 8	3	-	-	3	Department Elective	FT
	<b>Total</b>	<b>16</b>	<b>04</b>	<b>-</b>	<b>20</b>		
	<b>Minor / Honors – 4</b>	<b>3</b>	<b>-</b>	<b>2</b>	<b>4</b>		
	<b>Total</b>	<b>19</b>	<b>04</b>	<b>2</b>	<b>24</b>		
	<b>Contact Hours</b>	<b>25</b>					

#### IV Year II Semester

S. No.	Course Title	L	T	P	C	Remarks	Course Offered By
1.	Internship / Project Work	-	2#	22	12	Project	FT
2.	<b>Total</b>	<b>-</b>			<b>12</b>		
3.	<b>Minor / Honors – 5 (for project)</b>	<b>-</b>	<b>2</b>	<b>6</b>	<b>4</b>	<b>Theory course may be also offered</b>	<b>-</b>
4.	<b>Total</b>	<b>-</b>	<b>4</b>	<b>28</b>	<b>16</b>		<b>-</b>
	<b>Contact Hours</b>	<b>32</b>					

L=Lecture; T= Tutorial; P= Practical; C=Credits

### List of Department Elective Courses

S. No.	Course Title	L	T	P	C
<b>Stream-1 (Food Science and Technology)</b>					
1.	Emerging Trends in Food Processing	2	2	0	3
2.	Meat, Poultry and Fish Processing Technology	2	2	2	3
3.	Extrusion Technology	2	2	0	3
4.	Waste Management and By-Product Utilization	2	2	0	3
5.	Beverage Technology	2	0	2	3
6.	Spices and Plantation Crop Process Technology	2	0	2	3
7.	Post-Harvest Management of Fruits and Vegetables	2	2	0	3
<b>Stream-2 (Food Engineering)</b>					
8.	Engineering Properties of Food Material	2	2	0	3
9.	Refrigeration engineering and Cold Chain	2	2	0	3
10.	Bioprocess Engineering	2	2	0	3
11.	Instrument and Process Control	2	2	0	3
12.	Maintenance of Food Equipment	2	2	0	3
<b>Stream-3 (Food Business Management)</b>					
13.	Project Planning Preparation and Management	2	2	0	3
14.	Strategy and Marketing of Food Products	2	2	0	3
15.	Food Business Management and Entrepreneurship Development	2	2	0	3
16.	Food Supply Chain Management	2	2	0	3
17.	Production and Operations Management	2	2	0	3
<b>Stream-4 (Food Quality and Safety)</b>					
18.	Sensory Analysis of Food	2	0	2	3
19.	Food Toxicology Agrochemical Residues in Food	2	2	0	3
20.	Biosensor Design and Application	2	2	0	3
21.	Instrumental Methods of Food Analysis	2	0	2	3
22.	Food Quality Assurance and Certification	2	2	0	3

### List of Open Elective Courses

S. No.	Course Title	L	T	P	C
1.	Indian Traditional food	2	0	2	3
2.	Human Nutrition	2	2	0	3

### List of Honour /Specialization Courses

S. No.	Course Title	L	T	P	C
1.	Emerging Trends in Food Processing	2	2	2	4
2.	Extrusion Technology	2	2	2	4
3.	Beverage Technology	2	2	2	4
4.	Waste Management and by-Product Utilization	2	2	2	4
5.	Project	-	1	4	4

### List of Minor Courses

S. No.	Course Title	L	T	P	C
1.	Principles of Food Preservation and Processing	3	-	2	4
2.	Fruits and Vegetables Processing	3	-	2	4
3.	Dairy Technology	3	-	2	4
4.	Bakery and Confectionery Technology	3	-	2	4
5.	Food Safety and Quality Management	2	2	-	4

  
Chairperson





## DEPARTMENT OF FOOD TECHNOLOGY

### APPENDIX II

#### List of Courses that Enables Employability or Entrepreneurship or Skill Development

S. No.	Year and Semester	Course Title	Employability / Entrepreneurship / Skill development
1.	I Year I Semester	Elementary Mathematics	Skill development
2.	I Year I Semester	Food Biochemistry and Nutrition	Skill development
3.	I Year I Semester	Basic of Electrical & Electronics Engineering	Skill development
4.	I Year I Semester	IT Workshop and Food Engineering Products	Employability
5.	I Year I Semester	Programming in C	Skill development
6.	I Year I Semester	English Proficiency and Communication Skills.	Skill development
7.	I Year II Semester	Matrices and Calculus	Skill development
8.	I Year II Semester	Applied Physics	Skill development
9.	I Year II Semester	Engineering Graphics	Skill development
10.	I Year II Semester	Coding Competency (Basic)	Employability
11.	I Year II Semester	Technical English Communication	Skill development
12.	I Year II Semester	Food Chemistry	Skill development
13.	II Year I Semester	Probability and Statistics	Skill development
14.	II Year I Semester	Environmental Studies	Skill development
15.	II Year I Semester	Data Structures	Employability
16.	II Year I Semester	Management Science	Entrepreneurship
17.	II Year I Semester	Food Microbiology	Skill development
18.	II Year I Semester	Principles of Food Preservation and Processing	Entrepreneurship
19.	II Year I Semester	Engineering Thermodynamics	Skill development
20.	II Year II Semester	Coding Competency (Advance)	Entrepreneurship
21.	II Year II Semester	Professional Communication	Skill development
22.	II Year II Semester	Heat and Mass Transfer	Skill development
23.	II Year II Semester	Fruits and Vegetables Processing	Skill development
24.	II Year II Semester	Engineering Properties of Food Materials	Skill development
25.	II Year II Semester	Fundamentals of Fluid Mechanics	Skill development
26.	III Year I Semester	Soft Skills Lab	Skill development
27.	III Year I Semester	Food Processing Operations	Skill development

28.	III Year I Semester	Dairy Technology	Skill development
29.	III Year I Semester	Cereals, Legumes, Oilseed Process Technology	Skill development
30.	III Year I Semester	Inter-Departmental Project / Course	Skill development
31.	III Year I Semester	Modular Course	Employability
32.	III Year II Semester	Quantitative aptitude & Logical reasoning	Skill development
33.	III Year II Semester	Bakery and Confectionery Technology	Skill development
34.	III Year II Semester	Food Packaging	Skill development
35.	III Year II Semester	Inter-Departmental Project/Course	Skill development
36.	IV Year I Semester	Food Safety and Quality Management	Skill development
37.	IV Year I Semester	Food Plant Layout and Equipment Design	Skill development
38.	Dept. Elective	Emerging Trends in Food Processing	Skill development
39.	Dept. Elective	Meat, Poultry and Fish Processing Technology	Skill development
40.	Dept. Elective	Extrusion Technology	Skill development
41.	Dept. Elective	Waste Management and By-Product Utilization	Skill development
42.	Dept. Elective	Beverage Technology	Skill development
43.	Dept. Elective	Spices and Plantation Crop Process Technology	Skill development
44.	Dept. Elective	Post-Harvest Management of Fruits and Vegetables	Skill development
45.	Dept. Elective	Engineering Properties of Food Material	Skill development
46.	Dept. Elective	Refrigeration Engineering and Cold Chain	Skill development
47.	Dept. Elective	Bioprocess Engineering	Skill development
48.	Dept. Elective	Instrumentation and Process Control	Skill development
49.	Dept. Elective	Maintenance of Food Equipment	Employability
50.	Dept. Elective	Project Planning Preparation and Management	Entrepreneurship
51.	Dept. Elective	Strategy and Marketing of Food Products	Entrepreneurship
52.	Dept. Elective	Food Business Management and Entrepreneurship Development	Entrepreneurship
53.	Dept. Elective	Food Supply Chain Management	Employability
54.	Dept. Elective	Production and Operations Management	Employability
55.	Dept. Elective	Sensory Analysis of Food	Employability
56.	Dept. Elective	Food Toxicology Agrochemical Residues in Food	Skill development
57.	Dept. Elective	Biosensor Design and Application	Employability
58.	Dept. Elective	Instrumental Methods of Food Analysis	Employability
59.	Dept. Elective	Food Quality Assurance and Certification	Employability

  
**Chairperson**



**VIGNAN'S**

Foundation for Science, Technology & Research

(Deemed to be University)

ESTD 1983, AICTE NO. A011855

## DEPARTMENT OF FOOD TECHNOLOGY

### APPENDIX III

#### List of New Courses in the R22 Curriculum

S. No.	Year and Semester	Course Title	Employability / Entrepreneurship / Skill development
1.	I Year I Semester	Mathematics – I	Skill development
2.	I Year I Semester	IT Workshop and Food Engineering Products	Employability
3.	I Year II Semester	Orientation Session	Skill Development
4.	I Year II Semester	Matrices and Differential Equations	Skill Development
5.	III Year II Semester	Quantitative Aptitude and Logical Reasoning	Employability
6.	Dept. Elective	Food Business Management and Entrepreneurship Development	Employability
7.	Dept. Elective	Food Supply Chain Management	Employability
8.	Dept. Elective	Production and Operations Management	Employability
9.	Dept. Elective	Biosensor Design and Application	Employability
10.	Dept. Elective	Food Quality Assurance and Certification	Employability
11.	Dept. Elective	Sensory Analysis of Food	Employability
12.	Open Elective	Human Nutrition	Skill development
13.	Open Elective	Indian Traditional Food	Skill development

  
Chairperson