

**MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY**

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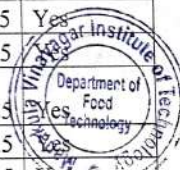
Kalitheerthalkuppam, Puducherry - 605107

**Department of Food Technology****CO - PO Attainment Table (2020-2024 batch)**

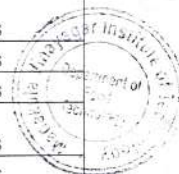
S.No	Code	Name of the subject	Number of students appear	Number of students passed	Pass percentage	Co-attainment	Target level	Target attainment
1	C101	Mathematics – I	26	26	100	2.65	2.5	Yes
2	C102	Physics	26	26	100	2.7	2.5	Yes
3	C103	Chemistry	26	26	100	2.7	2.5	Yes
4	C104	Basic Civil and Mechanical Engineering	26	26	100	2.65	2.5	Yes
5	C105	Engineering Mechanics	26	26	100	2.75	2.5	Yes
6	C106	Communicative English	26	26	100	2.88	2.5	Yes
7	C107	Physics Laboratory	26	26	100	2.75	2.5	Yes
8	C108	Chemistry Laboratory	26	26	100	2.75	2.5	Yes
9	C109	Workshop Practice	26	26	100	2.75	2.5	Yes
10	C110	Mathematics – II	26	26	100	2.64	2.5	Yes
11	C111	Material Science	26	26	100	2.58	2.5	Yes
12	C112	Environmental Science	26	26	100	2.86	2.5	Yes
13	C113	Basic Electrical and Electronics Engineering	26	26	100	2.74	2.5	Yes
14	C114	Engineering Thermodynamics	26	26	100	2.65	2.5	Yes
15	C115	Computer Programming	26	26	100	2.78	2.5	Yes
16	C116	Computer Programming Laboratory	26	26	100	2.75	2.5	Yes
17	C117	Engineering Graphics	26	26	100	2.75	2.5	Yes
18	C118	Basic Electrical and Electronics Laboratory	26	26	100	2.75	2.5	Yes



19	C119	NSS / NCC	26	26	100	2.78	2.5	Yes
20	C201	Fourier Series and Partial Differential Equations	26	26	100	2.88	2.5	Yes
21	C202	Introduction to Food Processing	26	26	100	2.8	2.5	Yes
22	C203	Food Process Calculations	26	26	100	2.86	2.5	Yes
23	C204	Food Microbiology	26	26	100	2.65	2.5	Yes
24	C205	Principles of Fluid Mechanics	26	25	96.15	2.65	2.5	Yes
25	C206	Food Chemistry	26	26	100	2.65	2.5	Yes
26	C207	Food Microbiology Laboratory	26	26	100	2.7	2.5	Yes
27	C208	Food Chemistry Laboratory	26	26	100	2.7	2.5	Yes
28	C209	Fluid Mechanics and Machinery Laboratory	26	26	100	2.65	2.5	Yes
29	C210	Probability and Statistics	26	26	100	2.75	2.5	Yes
30	C211	Food Analysis	26	26	100	2.88	2.5	Yes
31	C212	Fundamentals of Heat and Mass Transfer	26	25	96.15	2.65	2.5	Yes
32	C213	Nutritional Biochemistry	26	24	92.30	2.55	2.5	Yes
33	C214	Thermodynamics	26	25	96.15	2.65	2.5	Yes
34	C215	Unit Operations for Food Processing	26	25	96.15	2.65	2.5	Yes
35	C216	Food Analysis Laboratory	26	26	100	2.58	2.5	Yes
36	C217	Unit Operations Laboratory	26	26	100	2.86	2.5	Yes
37	C218	Nutritional Biochemistry Laboratory	26	26	100	2.74	2.5	Yes
38	C219	Physical Education	26	26	100	2.65	2.5	Yes
39	C301	Food Additives	26	26	100	2.78	2.5	Yes
40	C302	Enzyme and Fermentation Technology	26	26	100	2.75	2.5	Yes



41	C303	Refrigeration and Cold Chain Management	26	26	100	2.75	2.5	Yes
42	C304	Food Processing and Preservation	26	26	100	2.75	2.5	Yes
43	C305	Elective I - Pulse and Oil Seed Technology	26	26	100	2.78	2.5	Yes
44	C306	Elective II - Spices and Plantation Technology	26	26	100	2.88	2.5	Yes
45	C307	Food Processing and Preservation Laboratory	26	26	100	2.8	2.5	Yes
46	C308	Enzymes and Fermentation Technology Laboratory	26	26	100	2.86	2.5	Yes
47	C309	General Proficiency - I	26	26	100	2.65	2.5	Yes
48	C310	Food Process Engineering	26	26	100	2.65	2.5	Yes
49	C311	Baking and Confectionary Technology	26	26	100	2.75	2.5	Yes
50	C312	Fruits and Vegetable Processing	26	26	100	2.75	2.5	Yes
51	C313	Elective III - Cereal Technology	26	26	100	2.78	2.5	Yes
52	C314	Elective IV - Food Plant Layout	26	26	100	2.88	2.5	Yes
53	C315	Fruits and Vegetable Processing Laboratory	26	26	100	2.8	2.5	Yes
54	C316	Baking and Confectionary Technology Laboratory	26	26	100	2.86	2.5	Yes
55	C317	General Proficiency - II	26	26	100	2.65	2.5	Yes
56	C401	Dairy Process Technology	26	24	92.30	2.65	2.5	Yes
57	C402	Food Safety, Quality and Regulation	26	26	100	2.65	2.5	Yes
58	C403	Food Packaging Technology	26	26	100	2.78	2.5	Yes
59	C404	Elective V - Beverage	26	26	100	2.75	2.5	Yes



		Technology						
60	C405	Elective VI - Downstream Processing	26	26	100	2.75	2.5	Yes
61	C406	Testing of Packaging Materials Laboratory	26	26	100	2.75	2.5	Yes
62	C407	Dairy Process Technology Laboratory	26	26	100	2.78	2.5	Yes
63	C408	Industrial Visit/Training	26	26	100	2.88	2.5	Yes
64	C409	Project Work-I	26	26	100	2.8	2.5	Yes
65	C410	Professional Ethics	26	26	100	2.86	2.5	Yes
66	C411	Process Economics and Industrial Management	26	26	100	2.65	2.5	Yes
67	C412	Meat, Fish and Poultry Processing Technology	26	26	100	2.65	2.5	Yes
68	C413	Electives VII - Management of Food waste	26	26	100	2.65	2.5	Yes
69	C414	Electives VIII - Emerging Technologies in Food Processing	26	25	96.15	2.65	2.5	Yes
70	C415	Project Work-II	26	26	100	2.8	2.5	Yes



PO attainment

Course code	Course name	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
SEMESTER I													
C101	Mathematics – I	1	1	1	1	-	-	-	-	-	-	-	1
C102	Physics		3	3	3	-	3		-	-	-	-	3
C103	Chemistry	2	2	2	-	-	2	2	-	-	-	-	2
C104	Basic Civil and Mechanical Engineering	2	2	2	1	-	2	-	-	-	-	-	3
C105	Engineering Mechanics	2	2	2	2	-	2	-	-	-	-	-	2
C106	Communicative English	2	2	2	2	-	2	-	-	-	3	2	3
C107	Physics Laboratory	3	3	2	-	-	-	-	-	-	-	2	3
C108	Chemistry Laboratory	3	3	2	-	-	-	-	-	-	3	-	3
C109	Workshop Practice	3	3	3	-	-	-	-	-	-	-	2	3
SEMESTER II													
C110	Mathematics – II	2	2	1	2	-	-	-	1	-	-	1	2
C111	Material Science	2	1	2	1	-	-	-	-	-	-	2	2
C112	Environmental Science	1	1	1	-	2	3	-	-	-	-	2	3
C113	Basic Electrical and Electronics Engineering	2	1	2	-	1	1	-	-	-	-	1	2
C114	Engineering Thermodynamics	2	2	2	-	2	-	-	-	-	-	1	1
C115	Computer Programming	1	3	3	2	3	-	-	-	-	-	2	3
C116	Computer Programming Laboratory	1	3	3	2	3	-	-	-	-	-	2	3
C117	Engineering Graphics	1	2	1	1	1	-	-	-	-	-	2	2
C118	Basic Electrical and Electronics Laboratory	1	2	3	2	3	-	-	-	-	-	2	2
C119	NSS / NCC	3			3	3	3	3	3	3	3	3	3
SEMESTER III													
C201	Fourier Series and Partial Differential Equations	3	2	1	3	2	1	-	-	-	-	2	3
C202	Introduction to Food Processing	3	2	3	2	2	2	1	-	-	-	1	2

C203	Food Process Calculations	2	2	2	2	2	3	-	-	-	-	2	2
C204	Food Microbiology	3	2	1	3	2	1	-	-	-	-	2	3
C205	Principles of Fluid Mechanics	2	3	3	1	1	1	-	-	-	-	2	3
C206	Food Chemistry	3	3	3	1	-	-	1	-	1	-	2	2
C207	Food Microbiology Laboratory	3	2	1	3	2	1	-	-	-	-	2	3
C208	Food Chemistry Laboratory	3	3	3	1	-	-	1	-	1	-	2	2
C209	Fluid Mechanics and Machinery Laboratory	2	3	3	1	1	1	-	-	-	-	2	3

SEMESTER IV

C210	Probability and Statistics	1	2	3	1	3	1	-	-	-	1	1	2
C211	Food Analysis	1	2	3	1	-	-	-	-	-	1	2	3
C212	Fundamentals of Heat and Mass Transfer	2	1	2	-	-	-	2	-	-	1	2	2
C213	Nutritional Biochemistry	2	2	2	2	3	3	2	-	-	-	1	2
C214	Thermodynamics	3	2	3	2	2	2	1	-	-	-	1	2
C215	Unit Operations for Food Processing	2	2	1	1	1	1	1	-	-	-	1	2
C216	Food Analysis Laboratory	1	2	3	1	-	-	-	-	-	1	2	3
C217	Unit Operations Laboratory	2	2	2	2	2	2	1	-	-	-	2	3
C218	Nutritional Biochemistry Laboratory	2	2	2	2	3	3	2	-	-	-	1	2
C219	Physical Education	-	2	-	-	-	2	-	3	-	2	-	2

SEMESTER V

C301	Food Additives	3	2	3	1	1	-	-	-	-	-	1	2
C302	Enzyme and Fermentation Technology	2	2	2	2	-	2	2	-	-	-	1	2
C303	Refrigeration and Cold Chain Management	3	2	1	1	-	-	-	-	-	-	1	2
C304	Food Processing and Preservation	2	2	2	2	2	2	1	-	-	-	2	3
C305	Elective I - Pulse and Oil Seed Technology	2	2	2	2	-	2	2	-	-	-	1	2
C306	Elective II - Spices and Plantation Technology	3	2	1	1	-	-	-	-	-	-	1	2
C307	Food Processing and Preservation Laboratory	1	2	3	2	3	2	-	-	-	2	2	3
C308	Enzymes and Fermentation Technology Laboratory	2	2	2	2	0	2	1	-	-	-	1	2
C309	General Proficiency - I	-	-	-	-	2	3	3	2	3	1	3	2

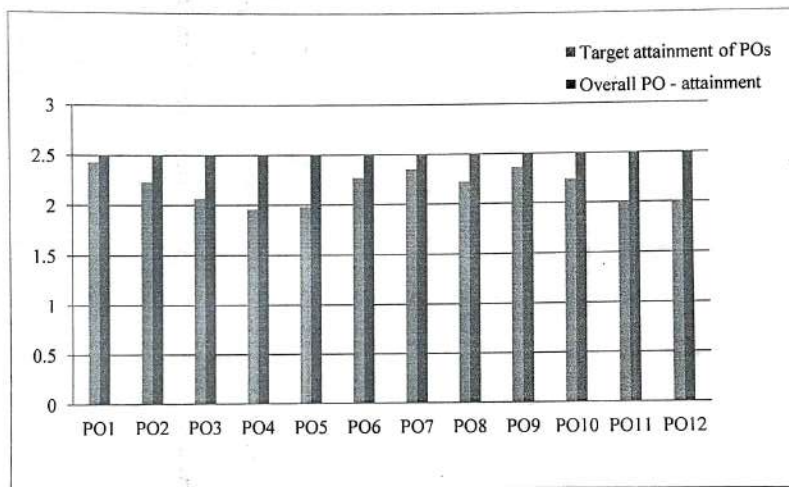


SEMESTER VI													
C310	Food Process Engineering	3	2	3	1	1	-	-	-	-	-	1	2
C311	Baking and Confectionary Technology	2	2	2	2	-	2	2	-	-	-	1	2
C312	Fruits and Vegetable Processing	3	2	1	1	-	-	-	-	-	-	1	2
C313	Elective III - Cereal Technology	2	2	3	1	-	-	1	-	-	-	2	2
C314	Elective IV - Food Plant Layout	3	3	2	-	-	-	1	-	-	-	1	3
C315	Fruits and Vegetable Processing Laboratory	2	2	1	1	-	-	-	-	-	1	1	2
C316	Baking and Confectionary Technology Laboratory	2	1	2	2	1	2	1	-	-	-	1	2
C317	General Proficiency – II	-	-	-	-	-	2	3	3	2	3	1	3
SEMESTER VII													
C401	Dairy Process Technology	3	3	3	2	-	-	-	-	-	-	1	1
C402	Food Safety, Quality and Regulation	2	3	1	-	-	-	-	-	-	-	2	3
C403	Food Packaging Technology	3	2	2	2	3	2	1	-	-	-	1	1
C404	Elective V - Beverage Technology	1	2	2	-	-	-	1	-	-	1	-	1
C405	Elective VI - Downstream Processing	1	1	2	2	-	-	-	-	-	1	1	2
C406	Testing of Packaging Materials Laboratory	3	2	2	2	2	2	1	-	-	-	1	2
C407	Dairy Process Technology Laboratory	3	3	3	2	-	-	-	-	-	-	1	1
C408	Industrial Visit/Training	2	1	1	-	-	2	-	-	-	2	1	
C409	Project Work-I	3	3	3	2	2	2	1	1	3	3	2	2
SEMESTER VIII													
C410	Professional Ethics	2	2	1	-	3	3	-	-	-	-	-	-
C411	Process Economics and Industrial Management	3	2	1	-	-	-	-	-	-	-	1	1
C412	Meat, Fish and Poultry Processing Technology	2		1	1	-	-	-	-	-	-	3	
C413	Electives VII - Management of Food waste	2	2	2	2	2	-	-	-	-	-	1	
C414	Electives VIII - Emerging Technologies in Food Processing	2	2	2	2	2	2	-	-	-	-	2	
C415	Project Work-II	3	3	3	2	2	2	1	1	3	2	2	



Po Attainment Level - Direct Assessment												
Pos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Average of Direct Assessment	2.42	2.18	2.02	1.81	1.92	2.28	2.3	2.2	2.43	1.96	1.92	1.96
Weightage Of 80% Of Direct Pos	1.94	1.74	1.61	1.45	1.54	1.84	1.76	1.94	1.78	1.57	1.54	1.57
PO Attainment Level - In Direct Assessment												
Surveys	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Programme Exit Survey	2.58	2.5	2.39	2.42	2.9	2.44	2.8	2.63	2.77	2.19	2.4	2.42
Alumini Survey	-	-	-	-	-	-	-	-	-	-	-	-
Employer Survey	2.37	2.42	2.47	2.32	2.21	2.03	2.11	2	2	1.89	2.42	2.32
Average of 3 Survey	2.475	2.46	2.43	2.37	2.555	2.235	2.455	2.315	2.385	2.04	2.41	2.37
Weightage of 20% Of In Direct Pos	0.49	0.49	0.46	0.51	0.44	0.45	0.51	0.46	0.42	0.46	0.42	0.46
Overall PO Attainment Level												
Pos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct 80%	1.94	1.74	1.61	1.45	1.54	1.82	1.84	1.76	1.94	1.78	1.57	1.54
Indirect 20%	0.49	0.49	0.46	0.51	0.44	0.45	0.51	0.46	0.42	0.46	0.42	0.46
Direct + Indirect	2.43	2.23	2.07	1.96	1.98	2.27	2.35	2.22	2.36	2.24	1.99	2.00
Target	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5





Overall PO attainment graph (2020-2024 batch)

PSO attainment (2020-2024 batch)

S. No.	Course Code	Name of the Subjects	PSO 1	PSO 2
SEMESTER I				
1	C101	Mathematics – I	3	1
2	C102	Physics	2	3
3	C103	Chemistry	2	-
4	C104	Basic Civil and Mechanical Engineering	2	-
5	C105	Engineering Mechanics	2	1
6	C106	Communicative English	2	2
7	C107	Physics Laboratory	-	3



8	C108	Chemistry Laboratory	-	2
9	C109	Workshop Practice	-	1
SEMESTER II				
10	C110	Mathematics -- II	-	2
11	C111	Material Science	-	1
12	C112	Environmental Science	-	1
13	C113	Basic Electrical and Electronics Engineering	1	2
14	C114	Engineering Thermodynamics	-	2
15	C115	Computer Programming	-	2
16	C116	Computer Programming Laboratory	-	2
17	C117	Engineering Graphics	-	1
18	C118	Basic Electrical and Electronics Laboratory	-	3
19	C119	NSS / NCC	-	-
SEMESTER III				
20	C201	Fourier Series and Partial Differential Equations	2	2
21	C202	Introduction to Food Processing	2	3
22	C203	Food Process Calculations	3	3
23	C204	Food Microbiology	3	3
24	C205	Principles of Fluid Mechanics	3	3
25	C206	Food Chemistry	3	3
26	C207	Food Microbiology Laboratory	3	3
27	C208	Food Chemistry Laboratory	2	1
28	C209	Fluid Mechanics and Machinery Laboratory	3	3
SEMESTER IV				
29	C210	Probability and Statistics	2	-
30	C211	Food Analysis	3	3
31	C212	Fundamentals of Heat and Mass Transfer	3	3
32	C213	Nutritional Biochemistry	3	3
33	C214	Thermodynamics	3	3
34	C215	Unit Operations for Food Processing	3	3
35	C216	Food Analysis Laboratory	3	3
36	C217	Unit Operations Laboratory	3	3
37	C218	Nutritional Biochemistry Laboratory	-	-



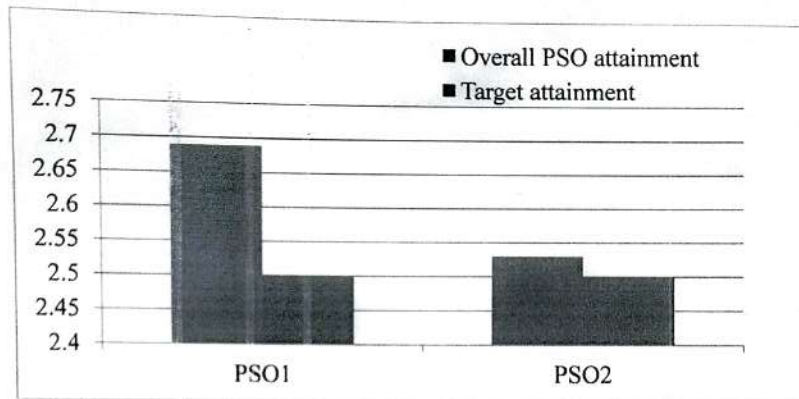
38	C219	Physical Education		
SEMESTER V				
39	C301	Food Additives	3	3
40	C302	Enzyme and Fermentation Technology	3	3
41	C303	Refrigeration and Cold Chain Management	3	3
42	C304	Food Processing and Preservation	3	3
43	C305	Elective I - Pulse and Oil Seed Technology	3	3
44	C306	Elective II - Spices and Plantation Technology	3	3
45	C307	Food Processing and Preservation Laboratory	3	3
46	C308	Enzymes and Fermentation Technology Laboratory	3	3
47	C309	General Proficiency - I		
SEMESTER VI				
48	C310	Food Process Engineering	3	3
49	C311	Baking and Confectionary Technology	3	3
50	C312	Fruits and Vegetable Processing	3	3
51	C313	Elective III - Cereal Technology	3	3
52	C314	Elective IV - Food Plant Layout	3	3
53	C315	Fruits and Vegetable Processing Laboratory	3	3
54	C316	Baking and Confectionary Technology Laboratory	3	3
55	C317	General Proficiency - II	-	3
SEMESTER VII				
56	C401	Dairy Process Technology	3	3
57	C402	Food Safety, Quality and Regulation	3	3
58	C403	Food Packaging Technology	3	3
59	C404	Elective V - Beverage Technology	3	3
60	C405	Elective VI - Downstream Processing	3	3
61	C406	Testing of Packaging Materials Laboratory	3	3
62	C407	Dairy Process Technology Laboratory	3	3
63	C408	Industrial Visit/Training	3	3
64	C409	Project Work-I	3	3
SEMESTER VIII				
65	C410	Professional Ethics	3	3



66	C411	Process Economics and Industrial Management	3	3
67	C412	Meat, Fish and Poultry Processing Technology	3	3
68	C413	Electives VII – Management of Food waste	3	3
69	C414	Electives VIII - Emerging Technologies in Food Processing	3	3
70	C415	Project Work-II	3	3

PSO attainment level - Direct Assessment		
PSO's	PSO1	PSO2
Average of Direct Assessment	2.82	2.66
Weightage of 80% of PO's	2.26	2.13
PSO Attainment Level - Indirect Assessment		
Surveys'	PSO1	PSO2
Course Exit Survey	2.17	2.11
Alumni Survey	-	-
Employer Survey	2	2.11
Average of Three Survey	2.085	2.11
Weightage of 20% Of Indirect Po's	0.43	0.4
Overall PO-attainment Level		
PSO's	PSO1	PSO2
Direct 80%	2.26	2.13
Indirect 20%	0.43	0.4
Direct + Indirect	2.69	2.53
Target	2.5	2.5





Over all PSO – Attainment Graph (2020- 2024 Batch)



Head of the Department

Department of Food Technology
Manakula Vinayagar Institute of Technology
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