

Courses Offered: B. Tech. (Agril. Engg.)

Compulsory Courses:

Sr. No:	Semester	Course No.	Credit	Course Title
1	I	PFE 111	2(1+1)	Thermodynamics
2	II	PFE 122	2(1+1)	Heat and Mass Transfer
3	III	PFE 233	2(1+1)	Engineering Properties of Agricultural Produce
4	IV	PFE 244	3(2+1)	Post Harvest Engineering of Cereals, Pulses and Oil seeds
5	V	PFE 355	3(2+1)	Dairy and Food Engineering
6	VI	PFE 366	2(1+1)	Post Harvest Engineering of Horticultural Crops
7	VI	PFE 367	2(1+1)	Refrigeration & Air Conditioning
8	VII	GAE 473/474	20(0+20)	Industrial attachment/ In-Plant Training/ELP
9	VIII	ELE PFE 483	2(1+1)	Food Packaging

M. Tech. (Processing and Food Engineering)

Sr. No.	Course Title	Course Code	Credits
1	Transport Phenomena in Food Processing	*PFE 501	2+1
2	Unit Operations in Food Process Engineering	*PFE 502	2+1
3	Field Crops Process Engineering	*PFE 503	2+1
4	Horticultural Crops Process Engineering	*PFE 504	2+1
5	Storage Engineering and Handling of Agricultural Produce	PFE 505	2+1
6	Food Package Engineering	PFE 506	1+1
7	Instrumentation and Sensors in Food Processing	PFE 507	2+1
8	Application of Engineering Properties in Food Processing	PFE 508	2+1
9	Food Quality and Safety	PFE 509	2+1
10	Food Processing Technologies	PFE 510	2+1
11	Food Processing Equipment and Plant Design	PFE 511	1+1
12	Seed Process Engineering	PFE 512	1+1
13	Agri-Project Planning and Management	PFE 513	2+1
14	Farm Structures and Environmental Control	PFE 514	2+1
15	Dairy Product Processing	PFE 515	2+1
16	Processing of Meat, Poultry and Fish	PFE 516	2+1
17	Design of Aquacultural Structures	PFE 517	2+1
18	Thermal Environmental Engineering for Agricultural Processing	PFE 518	2+1
19	Special problem	PFE 521	0+1
20	Internship	PFE 522	0+1

Total	33+20
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*Compulsory Courses

Suggested Disciplines for offering Minor Courses

Faculty	Department
Agril. Engg.	FMPE/ REE/CE/ME/CSE/BSCT
Agriculture	Economics /Horticulture/Food Science/STAT
Dairy Science & Technology	Dairy Technology, Dairy Engineering, Dairy Chemistry, Dairy Microbiology
Food Technology	Processing Technology /Process Engineering / Safety and Quality
Community Science	Food & Nutrition

Supporting courses (Requirement:06 Credits)

S.No.	Course Title	Course Code	Credits
1	Statistical Methods for Research Works	*STAT501	2+1
2	Courses from subject matter fields (other than Major and Minor) relating to area of special interest and research problem can be taken as per recommendations of the student's advisory committee.		

*Compulsory Course

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COMMON COURSES (Requirement: 05 Credits)

S. No.	Course Title	Course Code	Credits
1	Library and Information Services	*PGS 501	0+1
2	Technical Writing and Communications Skills	*PGS 502	0+1
3	Intellectual Property and its management in Agriculture	*PGS 503	0+1
4	Basic Concepts in Laboratory Techniques	*PGS 504	0+1
5	Agricultural Research, Research Ethics and Rural Development Programmes	*PGS 505	0+1

*Detailed course outline to be developed by designated BSMA

LIST OF OTHER ESSENTIAL REQUIREMENTS

Sr. No.	Course Title	Course Code	Credits
1	Seminar	PFE 591	0+1
2	Thesis Research	PFE 599	0+30

Ph.D. (Processing and Food Engineering)

S. No.	Course Title	Course Code	Credits
1	Advances in Food Process Engineering	*PFE 601	2+1
2	Drying and Dehydration of Food Materials	*PFE 602	2+1
3	Textural and Rheological Characteristics of Food Materials	PFE 603	2+1
4	Agricultural Waste and By-Products Utilization	PFE 604	2+1
5	Mathematical Modeling in Food Processing	PFE 605	3+0
6	Bioprocess Engineering	PFE 606	2+1
7	Special Problem	PFE 621	0+1
8	Internship	PFE 622	0+1
Total			13+7

Minor courses (Requirement: 06 Credits)

S. No.	Course Title	Course Code	Credits
1	Digital Image Processing	CSE 506	2+1
2	Process Control System	CSE 507	2+1
3	Renewable Energy for Industrial Application	REE 616	2+1
4	Mechatronics and Robotics in Agriculture	ME 501	2+0
5	Dimensional Analysis and Similitude	CE 501	1+1
6	Any other course (s) of other department other than course(s) from major can be taken as per recommendations of the student's advisory committee.		

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Community Science	Food & Nutrition

SUPPORTING COURSES (Requirement: 05 Credits)

S. No.	Course Title	Course Code	Credits
1	Research and Publication Ethics	*CPE-RPE	1+1
2	Theory of Designs and Analysis of Experiments	STAT 502	1+1
3	Courses from subject matter fields (other than Major and Minor) relating to area of special interest and research problem can be taken as per recommendations of the student's advisory committee.		

*Course has been made compulsory by UGC for PhD students. Course code and its detailed course outline to be adopted in toto as recommended by UGC.

Suggested Disciplines for offering Supporting Courses

Faculty	Department
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List of other essential requirements

S.No.	Course Title	Course Code	Credits
1	Seminar-I	PFE691	0+1
2	Seminar-II	PFE692	0+1
3	Thesis Research	PFE699	0+75