

**SEMESTER WISE COURSES FOR THE DEGREE OF
B.Tech. (Agricultural Engineering)**

Semester - I

S. No.	Course Name	Course No.	Credit (L + P / T)
1	Engineering Mathematics-I	Maths (E)-101	3 (2 + 1*)
2	Engineering Physics	Phy (E)-101	3 (2 + 1)
3	Engineering Chemistry	Chem (E)-101	3 (2 + 1)
4	Workshop Practice	FMP - 101	1 (0 + 1)
5	Surveying and Leveling	RE - 101	3 (1 + 2)
6	Engineering Drawing	FMP - 103	2 (0 + 2)
7	Environmental Science	ES - 101	3 (3 + 0)
8	Electrical Circuits	APE - 101	3 (2 + 1)
9	English	Eng (E) - 101	2 (1 + 1*)
	Total		23 (13+10)

Semester - II

S. No.	Course Name	Course No.	Credit (L + P / T)
1	Engineering Mathematics-II	Maths (E)-102	3 (2 + 1*)
2	Computers Programming and Data Structures	APE - 102	3 (1 + 2)
3	Applied Electronics and Instrumentation	RE - 102	3 (2 + 1)
4	Agriculture for Engineers	Agri (E) - 102	4 (3 + 1)
5	Workshop Technology	FMP - 102	3 (2 + 1)
6	Engineering Mechanics	FMP - 104	3 (2 + 1)
7	Thermodynamics and Heat Engines	FMP - 106	4 (3 + 1)
	Total		23 (15+8)

* Tutorials

Semester - III

S. No.	Course Name	Course No.	Credit (L + P / T)
1	Engineering Properties of Biological Materials and Food Quality	APE - 201	3 (2 + 1)
2	Soil Mechanics	SWE - 201	3 (2 + 1)
3	Fluid Mechanics	SWE - 203	3 (2 + 1)
4	Farm Machinery and Equipment - I	FMP - 201	3 (2 + 1)
5	Farm Power	FMP - 203	3 (2 + 1)
6	Watershed Hydrology	SWE - 205	3 (2 + 1)
7	Engineering Mathematics-III	Maths(E)-201	3 (2 + 1*)
8	Agribusiness Management and Trade	Eco (E)- 201	3 (3 + 0)
	Total		24 (17+7)

Semester - IV

S. No.	Course Name	Course No.	Credit (L + P / T)
1	Farm Machinery and Equipment - II	FMP - 202	3 (2 + 1)
2	Renewable Energy Sources	RE - 202	3 (2 + 1)
3	Soil and Water Conservation Engineering	SWE - 202	3 (2 + 1)
4	Irrigation Engineering	SWE - 204	4 (3 + 1)
5	Crop Process Engineering	APE - 202	3 (2 + 1)
6	Theory of Machines	FMP - 204	3 (2 + 1)
7	Heat and Mass Transfer	APE - 204	2 (2 + 0)
8	Database Management and Internet Applications	APE - 206	2 (0 + 2)
9	Field Operation and Maintenance of Tractors and Farm Machinery - I	FMP-206	1 (0 + 1)
	Total		24 (15+9)

* Tutorials

Semester - V

S. No.	Course Name	Course No.	Credit (L + P / T)
1	Machine Drawing and Computer Graphics	FMP - 301	3 (1 + 2)
2	Machine Design	FMP - 303	3 (2 + 1)
3	Dairy and Food Engineering	APE - 301	3 (2 + 1)
4	Tractor Systems and Controls	FMP - 305	3 (2 + 1)
5	Electrical Machines and Power Utilization	APE - 303	3 (2 + 1)
6	Field Operation and Maintenance of Tractors and Farm Machinery - II	FMP-307	2 (1 + 1)
7	Strength of Material	RE - 301	3 (2 + 1)
8	Ground Water, Wells and Pumps	SWE - 301	3 (2 + 1)
	Total		23 (14+9)

Semester - VI

S. No.	Course Name	Course No.	Credit (L + P / T)
1	Agricultural Structures and Environment Control	APE - 302	3 (2 + 1)
2	Drying and Storage Engineering	APE - 304	4 (3 + 1)
3	Design of Structures	RE - 302	3 (2 + 1)
4	Drainage Engineering	SWE - 302	2 (1 + 1)
5	Soil and Water Conservation Structures	SWE - 304	3 (2 + 1)
6	Refrigeration and Air Conditioning	FMP- 302	3 (2 + 1)
7	Entrepreneurship Development and Communication Skills	AEE - 302	3 (2 + 1*)
	Total		21 (14+7)

* Tutorials

Semester - VII

S. No.	Course Name	Course No.	Credit (L + P / T)
1	Project	AE - 401	6
2	Seminar	AE - 403	1
3	Renewable Energy Technology	RE - 401	3 (2 + 1)
4.	<i>Student will have to take minimum of 12 credits courses from the following Cafeteria Courses :</i>		12
	1. Food Packaging Technology	APE - 401	3 (2 + 1)
	2. Design and Maintenance of Greenhouse	RE - 403	3 (2 + 1)
	3. Waste and Byproduct Utilization	APE - 403	2 (1 + 1)
	4. Development of Processed Products and Equipments	APE - 405	3 (2 + 1)
	5. Food Processing Plant Design and Layout	APE - 407	2 (1 + 1)
	6. Micro Irrigation System Design	SWE - 401	3 (2 + 1)
	7. Watershed Planning and Management	SWE - 403	3 (2 + 1)
	8. Minor Irrigation and Command area Development	SWE - 405	3 (2 + 1)
	9. Gully and Ravine Control Structures	SWE - 407	3 (2 + 1)
	10. Remote Sensing & GIS Applications	SWE - 409	3 (2 + 1)
	11. System Engineering	SWE - 413	3 (3 + 0)
	12. Reservoir and Farm Pond Design	SWE - 411	3 (2 + 1)
	13. Tractor Design and Testing	FMP - 401	3 (2 + 1)
	14. Hydraulic Drive and Controls	FMP - 403	3 (2 + 1)
	15. Farm Power and Machinery Management	FMP - 405	3 (2 + 1)
	16. Human Engineering and Safety	FMP - 407	2 (1 + 1)
	17. Production Technology for Agril. Machinery	FMP - 409	3 (2 + 1)
	18. Mechanics of Tillage and Traction	FMP - 411	3 (2 + 1)
	19. Environmental Engineering	RE - 405	3 (2 + 1)
	20. Biomass Management for Fodder and Energy	RE - 407	2 (1 + 1)
	Total		22

Semester -VIII

Student will undertake in-plant training of 25 credits hours which will include practical training at the Institution, training in one (4 months) / two (2 months each) Industrial Units and Educational tour.	AE (SWE) - 402	10
	AE (FMP /APE / RE) - 404	15
	Total	25
	Grand Total	188

Legend :

Cr = Credit

L = Number of lectures per working week.

P = Number of practicals per working week

T = Number of tutorials per working week.

Credit : One credit means one lecture of 1 hour or 2 hours of tutorial or 2 to 3 hours of practical per working week.

Any one

Physical education or NCC or NSS First and Second Semester