

COLLEGE OF TECHNOLOGY

Graduation Requirement for B. Tech. Agricultural Engineering (Regular Students)

(As per Vth Deans' Committee recommendation)

S. No.	Course Number	Course Name	Credit Hours
I Semester			
1.	BPM-131	Engineering Mathematics-I	3(3+2+0)
2.	TCE-113	Engineering Drawing	2(1+0+1x2x2)
3.	TCE-142	Engineering Mechanics	3(2+0+1x2x2)
4.	TIP-102	Workshop Technology and Practices	3(1+0+2x2x2)
5.	*APS-103	Principles of Soil Science	3(2+0+1x2x2)
6.	BPC-164	Engineering Chemistry	3(2+0+1x2x2)
7.	TID/TCE/TSW/TME-109	Introduction to Environmental Engineering and Disaster Management	3(3+0+0)
8.	TPF-111	Heat and Mass Transfer	2(2+0+0)
9.	TIC-100	Induction Programme (2 weeks)	0(0-0-3)
10.	TWP-101	Work Program	1(0+0+1x1x3)
		Total	23(16+2+7)
II Semester			
1.	BPP-197	Engineering Physics	3(2+0+1x2x2)
2.	TSW-115	Surveying and Leveling	3(2+0+1x2x2)
3.	BPM-132	Engineering Mathematics-II	4(4+1+0)
4.	TPF-122	Entrepreneurship Development and Business Management	3(2+0+1x2x2)
5.	TSW-124	Fluid Mechanics and Open Channel Hydraulics	3(2+0+1x2x2)
6.	TIT-106	Computer Programming and Data Structures	3(2+0+1x2x2)
7.	TME-140	Theory of Machines	2(2+0+0)
8.	TCE-226	Strength of Materials	2(1+0+1x2x2)
		Total	23(17+1+6)
III Semester			
1.	*APH/APP/APE-207	Principles of Horticultural Crops and Plant Protection	2(1+0+1x2x2)
2.	*APA-201	Principles of Agronomy (For Agril. Engineering)	3(2+0+1x2x2)
3.	TID-227	Building Construction and Cost Estimation	2(2+0+0)
4.	TID-221	Irrigation Engineering	3(2+0+1x2x2)
5.	TSW-211	Soil Mechanics	2(1+0+1x2x2)
6.	BPM-235	Agril. Engineering Mathematics-III	2(2+1+0)
7.	TME-234	Machine Design	2(2+0+0)
8.	TME-205	Thermodynamics, Refrigeration and Air Conditioning	3(2+0+1x2x2)
9.	TMP-235	Fundamentals of Renewable Energy Sources	3(2+0+1x2x2)
10.	*NSS- 201	NSS	0
	*NCC		0
		Total	23(16+1+7)
IV Semester			
1.	BHS-280	Communication Skills and Personality Development	2(1+0+1x2x2)
2.	TEC-262	Applied Electronics and Instrumentation	3(2+0+1x2x2)
3.	TMP-236	Renewable Power Sources	3(2+1+1x2x2)
4.	TEE-262	Electrical Machines and Power Utilization	3(2+1+1x2x2)
5.	TCT-243	Web Designing and Internet Applications	2(1+0+1x2x2)
6.	TID-232	Sprinkler and Micro Irrigation Systems	2(1+0+1x2x2)

7.	TPF-242	Engineering Properties of Agricultural Produce	2(1+0+1x2x2)
8.	TSW-222	Watershed Hydrology	3(2+0+1x2x2)
9.	TMP-238	Farm Machinery and Equipment-I	3(2+1+1x2x2)
10.	*NSS- 202	NSS	1(0+0+1x1x4)
	*NCC		1(0+0+1x1x4)
		Total	23(14+3+9)
V Semester			
1.	TMP-319	Tractor Systems and Controls	3(2+1+1x2x2)
2.	TMP-351	Tractor and Automotive Engines	3(2+1+1x2x2)
3.	TID/TPF-355	Agricultural Structures and Environmental Control	3(2+0+1x2x2)
4.	TMP-353	Farm Machinery and Equipment-II	3(2+1+1x2x2)
5.	TSW-371	Soil and Water Conservation Engineering	3(2+0+1x2x2)
6.	TSW-373	Watershed Planning and Management	3(2+0+1x2x2)
7.	TID-353	Drainage Engineering	2(1+0+1x2x2)
8.	TPF-351	Post Harvest Engineering of Cereals, Pulses and Oil Seeds	3(2+0+1x2x2)
9.	*NSS-301	NSS	0
	*NCC		0
		Total	24(15+3+9)
VI Semester			
1.	TMP-354	Auto CAD Applications	2(0+0+2x2x2)
2.	TID-362	Groundwater, Wells and Pumps	4(3+0+1x2x2)
3.	TPF-364	Post Harvest Engineering of Horticultural Crops	2(1+0+1x2x2)
4.	TSW-382	Water Harvesting and Soil Conservation Structures	3(2+0+1x2x2)
5.	TMP-366	Tractor and Farm Machinery Operation and Maintenance	2(0+0+2x2x2)
6.	TPF-362	Dairy and Food Engineering	3(2+0+1x2x2)
7.	TMP-376	Bio-energy Systems: Design and Applications	3(2+1+1x2x2)
8.	TID/TSW/TPF/TMP-391	Skill Development Training-I (Student READY) Registration only	5(0+5)
9.	*NSS-302	NSS	1(0+0+1x1x4)
	*NCC		1(0+0+1x1x4)
		Total	24(10+1+14)
VII Semester			
Student READY (Rural and Entrepreneurship Awareness Development Yojana)			
1.	TID/TSW/TPF/TMP-493	10- weeks Industrial Attachment /Internship (Student READY)	10(0+10)
2.	TID/TSW/TPF/TMP-495	10- weeks Experiential Learning on Campus (Student READY)	10(0+10)
3.	TID/TSW/TPF/TMP-496	Skill Development Training-II (Student READY) Registration only	5(0+5)
		Total	25(0+25)
Educational tour during winter/January break			
VIII Semester			
Student READY (Rural and Entrepreneurship Awareness Development Yojana)			
1.	To be selected from the list of elective courses	Elective course	3(2+0+1x1x2)
2.		Elective course	3(2+0+1x1x2)
3.		Elective course	3(2+0+1x1x2)
4.	TCE-408	Design of Structures	2(1+0+1x2x2)

5.	TID/TSW/TPF/TMP-499	Project Planning and Report Writing (Student READY)	10(0+10)
6.	TID/TSW/TPF/TMP-494	Educational Tour (Registration only)	-
		Total	21(7+0+14)
		Grand Total	186 (95+11+91)
	Further those students who have not taken Hindi at the High school level shall also offer BHS-173 Elementary Hindi		Non-credit course

*Student may opt either NSS or NCC

List of electives: (Any three)

1.	TMP-412	Tractor Design and Testing	3(3-0-0)
2.	TID-424	Water Quality and Management Measures	3(3-0-0)
3.	TSW-428	Remote Sensing and GIS Applications	3(3-0-0)
4.	TPF-466	Process Equipment design	3(3-0-0)

*Courses taught by faculty from Agriculture College.

List of open electives:

First Semester

Third Year (Mon, Tue, Wed: 12-1)

TMP-377 3(3-0-0) **Machineries for Farm Mechanization**

Fourth Year (Thu, Fri, Sat: 12-1)

TPF-469 3(3-0-0) **Packaging Science and Technology**

Second Semester

Third Year:

TID-302 3(3-0-0) **Pressurized Irrigation System**

Final Year:

TSW-444 3(3-0-0) **Natural Resource Conservation**