

SETHU INSTITUTE OF TECHNOLOGY

PULLOOR, KARIAPATTI – 626115

(An Autonomous Institution affiliated to Anna University, Chennai)

CURRICULUM & SYLLABI

B.E AGRICULTURE ENGINEERING

REGULATIONS 2015

(Applicable to candidates admitted in the Academic Year 2016 - 2017)

CHAIRPERSON
BOARD OF STUDIES
AGRICULTURE ENGINEERING
SETHU INSTITUTE OF TECHNOLOGY

CHAIRMAN

ACADEMIC COUNCIL

Sethu Institute of Technology
Pulloor, Kariapatti - 625 115

SETHU INSTITUTE OF TECHNOLOGY

Pulloor, Kariapatti – 626 115

(An Autonomous Institution)

B.E. Degree Programme

CURRICULUM & SYLLABI

Regulations 2015

Bachelor of Engineering in Agriculture Engineering

OVERALL COURSE STRUCTURE

Category	Total No. of Courses	Credits	Percentage
Humanities and Social Sciences (HS)	3	6	3
Basic Sciences (BS)	11	29	16
Engineering Sciences (ES)	6	15	9
Professional Core(PC)	32	89	51
Professional Electives (PE)	6	18	11
Open Electives (OE)	3	9	5
Project W ork (PW)	2	8	5
TOTAL	63	174	100

COURSE CREDITS - SEMESTER WISE

Branch	ı	II	Ш	IV	V	VI	VII	VIII	TOTAL
Agriculture Engineering		22	24	25	23	23	21	14	174

Employability Courses
Skill Development Courses
Entrepreneurship Development Courses
Any two or all of the above

SEMESTER I

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С
THEORY	Y		•			
1.	15UEN101	Technical English (Common to ALL Branches)	2	0	0	2
2.	(15UMA102)	Engineering Mathematics – I) (Common to ALL Branches))	3	2	0	4
3.	(15UPH103)	(Common to ALL Branches)	3	0	0	3
4.	15UCY107	Chemistry for Agriculturist	3	0	0	3
5.	15UCS107	Computer Programming (Common to ALL Branches)	3	0	0	3
<u>6.</u>	(15UME108)	Engineering Graphics (Common to ALL Branches)	3	2	0	4
PRACTI	CAL		l .	I		I
7.	15UCS109	Computer Programming Laboratory (Common to ALL Branches)	0	0	2	1
8.	(15UME110)	Engineering Practices Laboratory (Common to ALL Branches)	0	0	2	1
9.	15UGS112	Basic Sciences Laboratory – I (Common to ALL Branches)	0	0	2	1
	-	TOTAL	16	2	9	22
		TOTAL NO. OF CREDITS - 22				

SEMESTER II

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С
THEOR	Y					
1.	15UEN201	Business English and Presentation Skills (Common to ALL Branches)	3	0	0	3
2.	(15UMA202)	(Engineering Mathematics – II) ((Common to ALL Branches))	3	2	0	4
3.	(15UPH207)	(Physics for Agricultural Engineering)	3	0	0	3
4.	15UAG204	Principles of Agricultural Engineering	3	0	0	3
(5.)	(15UCY207)	(Environmental Science) ((Common to ALL Branches))	3	0	0	3
6.	15UEE208	Basic Electrical and Electronics Engineering (Common to ALL Branches)	3	0	0	3
PRACTI	CAL		•	•	•	
7.	15UAG206	Agricultural Engineering Practices Lab	0	0	3	2
8.	15UGS210	Basic Sciences Laboratory – II (Common to ALL Branches)	0	0	2	1
		TOTAL	18	2	5	22
		TOTAL NO. OF CREDITS - 22				

SEMESTER III

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С						
THEOR	THEORY											
1.	15UMA321	Transforms and Partial Differential Equations	3	2	0	4						
2.	15UAG302	Unit Operations in Agricultural Processing	3	0	0	3						
3.	15UAG303	Fundamentals of Engineering Mechanics	3	0	0	3						
4.	15UAG304	(Fluid Mechanics and Hydraulics)	4	0	0	4						
5.	(15UAG305)	Fundamentals of Theory of Machines	3	0	0	3						
6.	(15UAG306)	(Principles and Practices of Crop Production	3	0	0	3						
7.	15UGS331	Value Education and Human Rights	2	0	0	P/F						
PRACTI	CAL											
8.	15UAG307	Crop Husbandry Laboratory	0	0	3	2						
9.	15UAG308	Fluid Mechanics Laboratory	0	0	3	2						
		21	2	6	24							
		TOTAL NO. OF CREDITS - 24										

SEMESTER IV

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С					
THEOR	THEORY										
1.	15UMA425	(Probability and Statistics)	3	1	0	4					
2.	15UAG402	Post Harvest Technology	3	0	0	3					
3.	(15UAG403)	(Farm Tractors	3	0	0	3					
4.	15UAG404	Soil and Water Conservation Engineering	3	0	0	3					
5.	15UAG405	Fundamental of Thermodynamics	4	0	0	4					
6.	15UAG406	Surveying for Agriculture	3	0	0	3					
7.	15UGS431	Reasoning and Quantitative Aptitude (Common to ALL Branches)	1	0	0	1					
PRACTI	CAL										
8.	15UAG407	Surveying Laboratory	0	0	3	2					
9.	15UAG408	Tractors and Farm Engines Laboratory	0	0	3	2					
	TOTAL 20 1 6										
		TOTAL NO. OF CREDITS - 25	-								

SEMESTER V

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С
THEOR	Y		•	•		
1.	15UAG501	Irrigation and Drainage Engineering	3	0	0	3
2.	15UAG502	Tillage and Sowing Implements	3	0	0	3
3.	15UAG503	Plant Protection and Harvesting Equipments	3	0	0	3
4.	15UAG504	Heat and Mass Transfer for Agriculture Engineers	3	0	0	3
5.		Professional Elective – I	3	0	0	3
6.		Professional Elective – II	3	0	0	3
PRACTI	CAL		•			l.
7.	15UAG507	Tillage and Sowing Equipments Laboratory	0	0	3	2
8.	(15UAG508)	Plant Protection and Harvesting Equipments (Laboratory)	0	0	3	2
9.	15UGS531	Soft skills and Communication – Laboratory (Common to CSE. ECE,EEE &AGRI)	0	0	2	1
		TOTAL	18	0	8	23
		TOTAL NO. OF CREDITS - 23				

SEMESTER VI

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С	
THEOR	Y						
1.	15UAG601	Solar and Wind Energy Engineering	3	0	0	3	
2.	(15UAG602)	(Hydrology and Water Resources Engineering)	3	0	0	3	
3.	(15UAG603)	(Design of Agricultural Machinery)	4	0	0	4	
4.		Professional Elective – III	3	0	0	3	
5.		Professional Elective – IV	3	0	0	3	
6.		Open Elective – I	3	0	0	3	
PRACTI	CAL						
7.	15UAG607	CAD for Agricultural Engineering	0	0	3	2	
8.	(15UAG608)	Innovative and Creative Project	0	0	3	2	
	TOTAL 19 0 6 23						
		TOTAL NO. OF CREDITS - 23					

SEMESTER VII

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С					
THEOR	THEORY										
1.	15UAG701	Bio-Energy Resource Technology	3	0	0	3					
2.	15UAG702	Dairy and Food Engineering	3	0	0	3					
3.	15UAG703	Farm Management and Finance	3	0	0	3					
4.		Professional Elective – V	3	0	0	3					
5.		Open Elective – II	3	0	0	3					
PRACTI	CAL				ı	,					
6.	15UAG706	Bio-Energy Laboratory	0	0	3	2					
7.	15UAG707	Post Harvest and Food Process Engineering Laboratory	0	0	3	2					
8.	15UGS531	Industrial Training (4 weeks)	0	0	0	2					
	TOTAL 15 0 6										
		TOTAL NO. OF CREDITS -21									

SEMESTER VIII

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С					
THEOR	THEORY										
1.	15UME801	Professional Ethics (Common to ALL Branches)	2	0	0	2					
2.		Professional Elective – VI	3	0	0	3					
3.		Open Elective – III	3	0	0	3					
PRACTI	CAL										
4.	15UAG804	Project work	0	0	12	6					
TOTAL 8				0	12	14					
	TOTAL NO. OF CREDITS - 14										

PROFESSIONAL ELECTIVES

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С
AGRICU	ILTURAL AND	FOOD PROCESS ENGINEERING				
1.	15UAG901	REFRIGERATION AND AIR-CONDTIONING FOR AGRICULTURE ENGINEERS	3	0	0	3
2.	15UAG902	STORAGE AND PACKAGING TECHNOLOGY	3	0	0	3
3.	(15UAG903)	SEED TECHNOLOGY APPLICATIONS	3	0	0	3
4.	15UAG909	FRUITS AND VEGETABLES PROCESSING	3	0	0	3
5.	15UAG915	DESIGN OF FOOD PROCESSING EQUIPMENT	3	0	0	3
FARM N	ACHINERY A	ND POWER		ı	I	I
6.	15UAG907	FARM POWER AND MACHINERY MANAGEMENT	3	0	0	3
7.	15UAG908	MECHANICS OF TILLAGE AND TRACTION	3	0	0	3
8.	15UAG916	MANUFACTURING PROCESSES	3	0	0	3
9.	(15UAG917)	TESTING AND MANAGEMENT OF FARM MACHINERY	3	0	0	3
LAND A	ND WATER CO	DNSERVATION ENGINEERING				
10.	15UAG904	WATERSHED MANAGEMENT	3	0	0	3
11.	15UAG905	MICRO IRRIGATION	3	0	0	3
12.	15UAG906	ON FARM WATER MANAGEMENT	3	0	0	3
13.	15UAG918	DESIGN AND CONSTRUCTION OF GREEN HOUSE	3	0	0	3
14.	15UAG919	FARM STRUCTURES	3	0	0	3
15.	15UAG922	GROUND AND WELL WATER ENGINEERING	3	0	0	3
BIOENE	RGY			•	•	l
16.	15UAG920	ENERGY AUDITING AND MANAGEMENT	3	0	0	3
17.	15UAG921	BIO AND THERMOCHEMICAL CONVERSION OFBIOMASS	3	0	0	3
OTHERS	S				1	
(18.	(15UAG910)	SYSTEMS ANALYSIS AND SOFT COMPUTING IN AGRICULTURAL ENGINEERING	3	0	0	3
19.	(15UAG911)	AGRICULTURAL ECONOMICS AND FARM MANAGEMENT	3	0	0	3
20.	15UAG912	AGRICULTURAL EXTENSION	3	0	0	3
21.	15UAG913	IT IN AGRICULTURAL SYSTEMS	3	0	0	3
22.	15UAG914	SOIL SCIENCE AND ENGINEERING	3	0	0	3

OPEN ELECTIVES

SL.NO	COURSE CODE	COURSE TITLE	L	Т	P	С
1.	15UAG971	PRINCIPLES OF AGRONOMY	3	0	0	3
2.	15UAG972	AGRIBUSINESS MANAGEMENT	3	0	0	3
3.	15UAG973	FUNDAMENTALS OF HORTICULTURE	3	0	0	3
4.	15UAG974	ORGANIC FARMING TECHNOLOGY	3	0	0	3
5.	15UAG975	SUTAINABLE AGRICULTURE AND FOOD SECURITY	3	0	0	3
6.	15UAG976	SEED PRODUCTION TECHNOLOGY	3	0	0	3
7.	15UAG977	SERICULTURE TECHNOLOGY	3	0	0	3
8.	15UAG978	BASICS OF LANDSCAPE GARDENING	3	0	0	3

ONE CREDIT COURSES

SL.NO	COURSE CODE	COURSE TITLE	L	Т	Р	С
1.	(15UAG861)	INTRODUCTION TO RENEWABLE ENERGY	1	0	0	1
2.	(15UAG862)	MUSHROOM CUTIVATION	1	0	0	1
3.	(15UAG863)	VERMICOMPOST TECHNOLOGY	1	0	0	1
4.	(15UAG864)	GREEN HOUSE TECHNOLOGY	1	0	0	1
5.	(15UAG865)	WATER HARVESTING TECHNOLOGY	1	0	0	1
6.	(15UAG866)	ENTREPRENEURSHIP DEVELOPMENT AND MANAGEMENT	1	0	0	1
7.	15UAG867	ENERGY AUDIT AND MANAGEMENT	1	0	0	1
8.	(15UAG868)	FARM MACHINERY, MANAGEMENT AND COST ECONOMICS	1	0	0	1
9.	(15UAG870)	LIQUID BIOFUELS	1	0	0	1
10.	(15UAG871)	SOLAR PV SYSTEM	1	0	0	1