SETHU INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

Pulloor, Kariapatti – 626 115.

B.E. ELECTRICAL AND ELECTRONICS ENGINEERING

REGULATIONS 2015

CHOICE BASED CREDIT SYSTEM

CURRICULUM & SYLLABUS

(I SEMESTER to VIII SEMESTER)

APPROVED IN THE ACADEMIC COUNCIL MEETING HELD ON 25.08.2018

CHAIRMAN
BOARD OF STUDIES

Chairperson
Board of Studies
Electrical & Electronics Engineering
Sethu Institute of Technology
Kariapatti - 626 115

CHAIRMAN
ACADEMIC COUNCIL

CHAIRMAN
ACADEMIC COUNCIL
Sethu Institute of Technology
Pulloor, Kariapatti - 625 115

SETHU INSTITUTE OF TECHNOLOGY

Pulloor, Kariapatti – 626 115

B.E. Degree Program - CBCS CURRICULUM
Regulations 2015

Bachelor of Engineering in Electrical and Electronics Engineering

OVERALL COURSE STRUCTURE

Category	Total No. of Courses	Credits	Percentage
Basic Sciences (BS)	**10**	**28**	**16**
Engineering Sciences (ES)	**13**	**29**	**17**
Humanities and Social Sciences (HS)	**6**	**14**	**8**
Program Core (PC)	**24**	**62**	**35**
Program Electives (PE)	**6**	**18**	**10**
Open Electives (OE)	**3**	**9**	**5**
Project(s) (PRO)	**2**	**15**	**9**
Internships/Seminars	**-**	**-**	**-**
Any other (Please specify)	**1 (Mandatory)**	**-**	**-**
TOTAL	**65**	**175**	**100**

COURSE CREDITS – SEMESTER WISE

Branch	I	II	III	IV	V	VI	VII	VIII	TOTAL
EEE	22	21	23	25	24	22	18	20	175

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

Semester I

Course Cod	Course Title	L	T	P	C
THEORY					
15UEN101	Technical English (Common to ALL Branches)	2	0	0	2
15UMA102	Engineering Mathematics – I (Common to ALL Branches)	3	2	0	4
15UPH103	Engineering Physics (Common to ALL Branches)	3	0	0	3
15UCY105	Applied Chemistry (Common to CSE,ECE,EEE ,IT & Biomedical)	3	0	0	3
15UCS107	Computer Programming	3	0	0	3
15UME108	Engineering Graphics (Common to ALL Branches)	3	2	0	4
PRACTICAL					
15UCS109	Computer Programming Laboratory (Common to ALL Branches)	0	0	2	1
15UME110	Engineering Practices Laboratory (Common to Mech, EEE,Civil,Chemical,Agri & Biomedical)	0	0	2	1
15UGS112	Basic Sciences Laboratory – I (Common to ALL Branches)	0	0	2	1
	TOTAL	**17**	**4**	**6**	**22**
Total No. of Credits – 22					

Semester II

Course Code	Course Title	L	T	P	C
THEORY					
15UEN201	Business English and Presentation Skills (Common to ALL Branches)	3	0	0	3
15UMA202	Engineering Mathematics – II (Common to ALL Branches)	3	2	0	4
15UPH204	Solid State Physics (Common to EEE & Biomedical)	3	0	0	3
15UCY207	Environmental Science (Common to ALL Branches)	3	0	0	3
15UME208	Basic Civil and Mechanical Engineering (Common to MECH & EEE)	3	0	0	3
15UEE209	Electric Circuits	2	2	0	3
PRACTICAL					
15UGS210	Basic Science Laboratory – II (Common to ALL Branches)	0	0	2	1
15UEE211	Electric Circuits Laboratory	0	0	2	1
	TOTAL	**17**	**4**	**4**	**21**
Total No. of Credits – 21					

Semester III

Course Code	Course Title	L	T	P	C
THEORY					
15UMA321	Transforms and Partial Differential Equations (Common to MECH, ECE, EEE, Civil, Chemical, Agri, Bio Medical)	3	2	0	4
15UEE302	DC Machines and Transformers	4	0	0	4
15UEE303	Field Theory	3	0	0	3
15UEE304	Power System Generation	3	0	0	3
15UEE305	Semiconductor Devices and Circuits	3	0	0	3
15UEE306	Digital Logic Circuits	4	0	0	4
PRACTICAL					
15UEE307	DC Machines and Transformers Laboratory	0	0	2	1
15UEE308	Semiconductor Devices and Circuits Laboratory	0	0	2	1
	TOTAL	**20**	**2**	**4**	**23**
Total No. of Credits – 23					

Semester IV

Course Code	Course Title	L	T	P	C
THEORY					
15UMA422	Numerical Methods (Common to EEE, CIVIL & CHEMICAL)	3	2	0	4
15UEE402	AC Machines	3	0	0	3
15UEE403	Control Systems	3	2	0	4
15UEE404	Transmission and Distribution	3	2	0	4
15UEE405	Analog Integrated Circuits	3	0	0	3
15UEE406	Electrical Measurements and Instrumentation	3	0	0	3
15UGS431	Reasoning and Quantitative Aptitude (Common to ALL Branches)	1	0	0	1
PRACTICAL					
15UEE408	AC Machines Laboratory	0	0	2	1
15UEE409	Control and Instrumentation Laboratory	0	0	2	1
15UEE410	Digital and Analog Integrated Circuits Laboratory	0	0	2	1
	TOTAL	**19**	**6**	**6**	**25**
Total No. of Credits – 25					

Semester V

Course Code	Course Title	L	T	P	C
THEORY					
15UEE501	Power Electronics	3	0	0	3
15UEE502	Power System Analysis	3	2	0	4
15UEE503	Microprocessors and Microcontroller Programming	3	0	0	3
15UEE504	Electrical Machine Design	3	2	0	4
	Elective I	3	0	0	3
	Elective II	3	0	0	3
PRACTICAL					
15UEE507	Power Electronics Laboratory	0	0	2	1
15UEE508	Microprocessors and Microcontroller Programming Laboratory	0	0	2	1
15UEE509	Electrical Machine Design Simulation Laboratory	0	0	2	1
15UGS531	Soft Skills and Communication Laboratory (Common to CSE, ECE, EEE & IT Branches)	0	0	2	1
	TOTAL	**18**	**4**	**8**	**24**
Total No. of Credits – 24					

Semester VI

Course Code	Course Title	L	T	P	C
THEORY					
15UEE601	Advanced Electric Drives and Control	2	0	2	3
15UEE602	Protection and Switch Gear	3	0	0	3
15UEC621	Signal Processing (Common to EEE & EIE)	3	0	0	3
	Elective III	3	0	0	3
	Elective IV	3	0	0	3
	Open Elective – I	3	0	0	3
PRACTICAL					
15UCS627	Problem Solving using “C” (For EEE)	0	0	2	1
15UEE608	Technical Project	0	0	6	3
	TOTAL	**17**	**0**	**10**	**22**
Total No. of Credits – 22					

Semester VII

Course Code	Course Title	L	T	P	C
THEORY					
15UME701	Project Management & Finance (Common to MECH,CSE,ECE,EEE,IT & EIE)	3	0	0	3
15UEE702	Power System Operation and Control	3	2	0	4
15UEE703	Electric Energy Utilization	3	0	0	3
	Elective V	3	0	0	3
	Open Elective – II	3	0	0	3
PRACTICAL					
15UEE706	Power System Simulation Laboratory	0	0	2	1
15UEC727	Signal Processing Laboratory	0	0	2	1
	TOTAL	**15**	**2**	**4**	**18**
Total No. of Credits –18					

Semester VIII

Course Code	Course Title	L	T	P	C
THEORY					
15UME801	Professional Ethics (Common to ALL Branches)	2	0	0	2
	Elective VI	3	0	0	3
	Open Elective – III	3	0	0	3
PRACTICAL					
15UEE804	Project Work	0	0	24	12
	TOTAL	**8**	**0**	**24**	**20**
Total No. of Credits – 20					

LIST OF PROGRAM ELECTIVES

Sl. No.	Course Code	Course Title	L	T	P	C
1.	15UEE901	Network Analysis and Synthesis	3	0	0	3
2.	15UEE902	Advanced Control Theory	3	0	0	3
3.	15UEE903	High Voltage Engineering	3	0	0	3
4.	15UEE904	HVDC Transmission	3	0	0	3
5.	15UEE905	Software circuit for Simulation	3	0	0	3
6.	15UEE906	Special Electrical Machines	3	0	0	3
7.	15UEE907	Computer Aided Design of Electrical Apparatus	2	0	2	3
8.	15UEE908	Introduction to Micro Electro Mechanical Systems	3	0	0	3
9.	15UEE909	Micro Grid and Distributed Generation Systems	3	0	0	3
10.	15UEE910	VLSI Design and Architecture	3	0	0	3
11.	15UEE911	Adaptive Control	3	0	0	3
12.	15UEE912	Operation and Maintenance of Electrical Equipments	3	0	0	3
13.	15UEE913	Power System Transients	3	0	0	3
14.	15UEE914	Numeric Relays	3	0	0	3
15.	15UEE915	Neural Network and Fuzzy Systems	3	0	0	3
16.	15UEE916	Embedded Systems	3	0	0	3
17.	15UEE917	Power Electronics for Renewable Energy Systems	3	0	0	3
18.	15UEE918	Power Quality	3	0	0	3
19.	15UEE919	Flexible AC Transmission System	3	0	0	3
20.	15UEE920	Evolutionary Computation	3	0	0	3
21.	15UEE921	Power System Dynamics	3	0	0	3
22.	15UEE922	Deregulation and Restructured Power systems	3	0	0	3
23.	15UEE923	Smart Grid Technologies	3	0	0	3
24.	15UEE924	Energy Audit	3	0	0	3
25.	15UEE925	Erection, Testing and Commissioning of Electrical Equipments	3	0	0	3
26.	15UEE926	PLC and SCADA Applications	3	0	0	3
27.	15UEE927	Power Plant Instrumentation and control	3	0	0	3

Sl. No.	Course Code	Course Title	L	T	P	C
28.	15UEC954	Principles of Communication Engineering	3	0	0	3
29.	15UCS955	Data structure and Algorithm Analysis in C	3	0	0	3
30.	15UPH951	Fundamentals of Nano Science	3	0	0	3

LIST OF OPEN ELECTIVES

S.No.	Course Code	Course Title	L	T	P	C
1	15UEE971	Non Conventional Energy Resources and Applications	3	0	0	3
2	15UEE972	Electric and Hybrid Vehicles	3	0	0	3
3	15UEE973	Solar Power Plants	3	0	0	3
4	15UEE974	MEMS	3	0	0	3
5	15UEE975	Principles of Robotics	3	0	0	3
6	15UEE976	Applied Soft Computing	3	0	0	3

LIST OF MANDATORY COURSES

CATEGORY	COURSES
Personality and Social Development	Sports
	National Service Scheme
	Club Activities (ECO Club, Red Ribbon Club, YRC, Photography Club)
	Extra Curricular Activities
Skills Development	English Proficiency Certificate such as BEC, TOFEL, IELTS
	Foreign Languages
	Soft Skills and Aptitude
	Aptitude Proficiency certificate such as GRE, GMAT, CAT
	Co-Curricular Activities
	Intellectual Property Rights
Value Education	Value Education and Human Rights

LIST OF INDUSTRY DESIGNED COURSES

Sl. No.	Course Code	Course Title	L	T	P	C
1	15UEE861	Wind farm Development and Operation	1	0	0	1
2	15UEE862	Design of Towers and Blades Structures	1	0	0	1
3	15UEE863	Wind Turbine Blades Fabrication Technology	1	0	0	1
4	15UEE864	Solar Photovoltaic Technology	1	0	0	1
5	15UEE865	Industrial safety measures	1	0	0	1
6	15UEE866	ECO Paint Application Technology for Automobile Industry	1	0	0	1
7	15UEE867	Energy Storage Systems	1	0	0	1
8	15UEE868	Controlling and Monitoring of Electrical Equipments using Mobile Applications	1	0	0	1
9	15UEE869	Electrical Rewinding Laboratory	1	0	0	1

LIST OF INTERDISCIPLINARY COURSES

Sl. No.	Course Code	Course Title	L	T	P	C
1	15UGM954	Smart Buildings	3	0	0	3
2	15UGM955	Electric Vehicles	3	0	0	3
3	15UGM956	Electrical Hazards & Safety In Hospitals	3	0	0	3