

SETHU INSTITUTE OF TECHNOLOGY

PULLOOR, KARIAPATTI – 626 115.

(AN AUTONOMOUS INSTITUTION)



REGULATION – 2015

B.E ELECTRONICS AND COMMUNICATION ENGINEERING

CHOICE BASED CREDIT SYSTEM

CURRICULUM & SYLLABUS

CHAIRPERSON

Head Of The Department,
Electronics & Communication
Sethu Institute Of Technology,
Kariapatti-626 115

**CHAIRMAN
ACADEMIC COUNCIL**

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Sethu Institute of Technology
Pulloor, Kariapatti - 625 115**



Estd : 1995

SETHU INSTITUTE OF TECHNOLOGY

Pulloor, Kariapatti – 626 115

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B.E. Degree Programme

CURRICULUM

Regulations 2015

Bachelor of Engineering in Electronics & Communication Engineering

OVERALL COURSE STRUCTURE

Category	Total No. of Courses	Credits	Percentage
Humanities & Social Sciences	6	14	8.19
Basic Sciences	10	28	16.37
Engineering Sciences	8	20	11.70
Professional Core	27	67	39.18
Professional Elective	6	18	10.53
Open Electives	3	9	5.26
Project Work	2	15	8.77
TOTAL	62	171	100

COURSE CREDITS – SEMESTER WISE

Branch	I	II	III	IV	V	VI	VII	VIII	TOTAL
ECE	22	21	23	24	22	23	16	20	171

Employability Courses

Skill Development Courses

Entrepreneurship Development Courses

Any two or all of the above

Semester I

Course Code	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,EIE & Bio Medical)	3	0	0	3
15UCS107	Computer Programming(Common to all Branches)	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
15UCS111	Engineering Fundamentals Laboratory (Common to CSE,ECE,IT)	0	0	2	1
15UGS112	Basic Sciences Laboratory-I (Common to all Branches)	0	0	2	1
	TOTAL	16	2	10	22
Total No. of Credits : 22					

Semester II

Course	Course Title	L	T	P	C
THEORY					
15UEN201	Business English & Presentation Skills (Common to all Branches)	3	0	0	3
15UMA202	Engineering Mathematics – II(Common to all Branches)	3	2	0	4
15UPH205	Semi conductor Physics & Opto Electronics (Common to CSE,ECE,IT)	3	0	0	3
15UCY207	Environmental Science (Common to all Branches)	3	0	0	3
15UEC208	Electronic Devices	3	0	0	3
15UEC209	Basic Electronic Measurements	3	0	0	3
PRACTICAL					
15UGS210	Basic Sciences Laboratory-II (Common to all Branches)	0	0	2	1
15UEC211	Electronic Devices Laboratory	0	0	2	1
	TOTAL	18	2	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, BIOMEDICAL)	3	2	0	4
15UEC302	Digital Electronics and Design	3	0	0	3
15UEC303	Circuit Theory	3	2	0	4
15UEC304	Electronic Circuits	3	0	0	3
15UEC305	Analog Communication	3	0	0	3
15UIT326	Data Structures and Algorithm Analysis	3	0	2	4
PRACTICAL					
15UEC307	Digital Electronics Laboratory	0	0	2	1
15UEC308	Circuits Laboratory	0	0	2	1
	TOTAL	18	4	6	23
Total No. of Credits : 23					

Semester IV

Course Code	Course Title	L	T	P	C
THEORY					
15UMA424	Probability and Random Processes (Common to ECE, BIOMEDICAL)	3	2	0	4
15UEC402	Analog Circuits	3	0	0	3
15UEC403	Electromagnetic Fields	3	0	0	3
15UEC404	Signals and Systems	3	2	0	4
15UEC405	Digital Communication	3	0	0	3
15UEE426	Principles of Electrical Machines	3	0	0	3
15UGS431	Reasoning and Quantitative Aptitude (Common to all Branches)	1	0	0	1
PRACTICAL					
15UEC407	Analog Circuits Laboratory	0	0	2	1
15UEC408	Communication System Laboratory	0	0	2	1
15UCS429	Programming with C Laboratory	0	0	2	1
	TOTAL	19	4	6	24
Total No. of Credits : 24					

Semester V

Course Code	Course Title	L	T	P	C
THEORY					
15UEC501	Digital Signal Processing	3	2	0	4
15UEC502	Transmission Lines and Waveguides	3	0	0	3
15UEC503	Microprocessors, Microcontrollers and Applications	3	0	0	3
15UEC504	Data Communication and Networks	3	0	0	3
	Professional Elective I	3	0	0	3
	Professional Elective II	3	0	0	3
PRACTICAL					
15UEC507	Digital Signal Processing Laboratory	0	0	2	1
15UEC508	Microprocessors, Microcontrollers and Applications Laboratory	0	0	2	1
15UGS531	Soft Skills and Communication Laboratory (Common to CSE, ECE, EEE, IT)	0	0	2	1
	TOTAL	18	2	6	22
Total No. of Credits : 22					

Semester VI

Course Code	Course Title	L	T	P	C
THEORY					
15UEC601	Wireless Communication Systems	3	0	0	3
15UEC602	Antenna and Wave Propagation	3	0	0	3
15UEC603	VLSI Design	3	0	0	3
	Open Elective I	3	0	0	3
	Professional Elective III	3	0	0	3
	Professional Elective IV	3	0	0	3
PRACTICAL					
15UEC607	Networks Laboratory	0	0	2	1
15UEC608	VLSI Design Laboratory	0	0	2	1
15UEC609	Technical Project	0	0	6	3
	TOTAL	18	0	10	23
Total No. of Credits : 23					

Semester VII

Course Code	Course Title	L	T	P	C
THEORY					
15UME701	Project Management and Finance (Common to MECH,CSE, ECE,EEE,IT,EIE)	3	0	0	3
15UEC702	Optical Communication and Networks	3	0	0	3
15UEC703	Microwave Engineering	3	0	0	3
	Open Elective II	3	0	0	3
	Professional Elective V	3	0	0	3
PRACTICAL					
15UEC706	Optical and Microwave communication Laboratory	0	0	2	1
	TOTAL	15	0	2	16
Total No. of Credits : 16					

Semester VIII

Course Code	Course Title	L	T	P	C
THEORY					
15UME801	Professional Ethics (Common to all Branches)	2	0	0	2
	Open Elective III	3	0	0	3
	Professional Elective VI	3	0	0	3
PRACTICAL					
15UEC804	Project Work	0	0	24	12
	TOTAL	8	0	24	20
Total No. of Credits : 20					

LIST OF PROFESSIONAL ELECTIVES

SUBJECT CODE	SUBJECT NAME	L	T	P	C
15UEC901	Advanced Microcontrollers	3	0	0	3
15UEC902	Mobile Ad-hoc Networks	3	0	0	3
15UEC903	ARM Processor	2	0	2	3
15UEC904	Linear Control Engineering	3	0	0	3
15UEC905	DSP Processor Architecture	3	0	0	3
15UEC906	Advanced Digital System Design	3	0	0	3
15UEC907	High Speed Networks	3	0	0	3
15UEC908	Soft Computing Techniques	3	0	0	3
15UEC909	Digital Image Processing	2	0	2	3
15UEC910	Multimedia Compression and Communication	3	0	0	3
15UEC911	Television and Video Engineering	3	0	0	3
15UEC912	RF Circuit Design	3	0	0	3
15UEC913	Wireless Networks and Standards	3	0	0	3
15UEC914	FPGA-Based System Design	3	0	0	3
15UEC915	Internet of Things	3	0	0	3
15UEC916	Satellite Communication Principles and Applications	3	0	0	3
15UEC917	Speech and Audio Signal Processing	3	0	0	3
15UEC918	Remote Sensing and Information System	3	0	0	3
15UEC919	Nano electronics	3	0	0	3
15UEC920	Advanced Trends in Telecommunication	3	0	0	3
15UEC921	Embedded and Real Time Systems	2	0	2	3
15UEC922	Medical Electronics	3	0	0	3
15UEC923	Advanced Wireless technologies	3	0	0	3
15UEC924	Artificial Intelligence And Machine Learning	3	0	0	3
15UMA952	Numerical Techniques and Linear Algebra	2	2	0	3

INTERDISCIPLINARY ELECTIVE

Course Code	Course Title	L	T	P	C
15UGM953	Embedded Programming (Common to CSE &ECE)	3	0	0	3

OPEN ELECTIVES

Course Code	Course Title	L	T	P	C
15UEC971	Consumer Electronics	3	0	0	3
15UEC972	Remote Sensing and its Applications	3	0	0	3
15UEC973	Embedded Systems and Programming	3	0	0	3
15UEC974	Fundamentals of Digital Signal Processing	3	0	0	3
15UEC975	Fundamentals of Digital Image Processing	3	0	0	3
15UEC976	Sensors And Actuators	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 ONE CREDIT COURSES

Course Code	Course Title	L	T	P	C
15UEC861	PIC Embedded Programming	1	0	0	1
15UEC862	PCB Design	1	0	0	1
15UEC863	PYTHON Programming	1	0	0	1
15UEC864	ANDROID	1	0	0	1
15UEC865	Programming in R	1	0	0	1