



School Of Electronics Engineering (SENSE)

B.Tech (Electronics & Communication Engineering)

CURRICULUM

[2015-16 Batch Onwards]

[Curriculum for Applied Learning (CAL)]

Sl. No	Category	Total number of Credits
1	University Core (UC)	70
2	University Elective(UE)	12
3	Program Core(PC)	61
4	Program Elective (PE)	37
Total Number of Credits		180

Category(CAT)	%	Credits	UC	PC	PE	UE
Engineering (E)	62	112	31	44	37	0
Science(S)	24	43	23	17	0	03
Humanities(H)	08	15	12	0	0	03
Management (M)	06	10	4	0	0	06
Total	100	180	70	61	37	12

University Core- 70 Credits

No	Course Code	Course Title	L	T	P	J	C	Category
1	ECE3999	Tech Answers for Real world Problems	1	0	0	8	3	Engineering
2	CSE1001	Problem solving and programming	0	0	6	0	3	Engineering
3	CSE1002	Problem solving with Object Oriented Programming	0	0	6	0	3	Engineering
4	ECE4098	Comprehensive Examination	0	0	0	0	2	Engineering
5	PHY1999	Introduction to Innovative Projects	1	0	0	4	2	Science
6	CHY1002	Environmental Science	2	0	0	4	3	Science
7	MAT1011	Calculus for Engineers	2	1	0	4	4	Science
8	MAT2001	Statistics for Engineers	2	1	2	0	4	Science
9	PHY1001	Engineering Physics	3	0	2	4	5	Science
10	CHY1001	Engineering Chemistry	3	0	2	4	5	Science
11	EXC4097	Personality Development(extra &co curricular activities)					2	Management
12	MGT1022	Lean Start-up Management	1	0	0	4	2	Management
13	STS1001	Soft Skills	-	-	-	-	1	Humanities
14	STS2001	Soft Skills	-	-	-	-	1	Humanities
15	STS2002	Soft Skills	-	-	-	-	1	Humanities
16	STS3001	Soft Skills	-	-	-	-	1	Humanities
17	STS3005	Soft Skills	-	-	-	-	1	Humanities
18	STS3007	Soft Skills	-	-	-	-	1	Humanities
19	FLC4097	Foreign Language Course basket	2	0	0	0	2	Humanities
20	ENG1011	English for Engineers	1	0	2	0	2	Humanities
21	HUM1021	Ethics and Values	1	0	0	4	2	Humanities
22	ECE4099	Co-op / Capstone Project	0	0	0	0	20	Engineering
		TOTAL					70	

University Electives- 12 Credits

University Electives are meant to develop interdisciplinary skills among the students. So the students can take any courses other than their University and Program core courses as their University elective courses. Student should have completed minimum of 12 credits under university electives to full fill their requirements to complete their B.Tech Degree.

Program Core- 61 Credits

L- Lecture

T – Tutorial

P – Practical

J – Project

C – Credits

E – Engineering

S - Science

No.	Course Code	Course Title	L	T	P	J	C	Category	Pre-Requisite
1.	ECE1001	Fundamentals of Electrical Circuits	2	0	2	0	3	Engineering	None
2.	ECE1002	Semiconductor Devices and Circuits	3	0	0	4	4	Engineering	None
3.	ECE1003	Electromagnetic Field Theory	3	0	0	0	3	Science	PHY1001
4.	ECE1004	Signals and Systems	2	0	0	4	3	Science	MAT1011
5.	ECE1005	Sensors and Instrumentation	1	0	0	4	2	Engineering	PHY1001
6.	ECE2001	Network Theory	3	0	0	0	3	Engineering	ECE1001
7.	ECE2002	Analog Electronic Circuits	2	0	2	4	4	Engineering	ECE1002
8.	ECE2003	Digital Logic Design	2	0	2	0	3	Engineering	ECE1002
9	ECE2004	Transmission lines and Waveguides	3	0	0	0	3	Engineering	ECE1003
10.	ECE2005	Probability Theory and Random Processes	3	0	0	0	3	Science	ECE1004
11.	ECE2006	Digital Signal Processing	2	0	2	4	4	Engineering	ECE1004
12.	ECE3001	Analog Communication Systems	3	0	2	0	4	Engineering	ECE2002
13.	ECE3002	VLSI System Design	3	0	2	0	4	Engineering	ECE2003
14.	ECE3003	Microcontroller and its applications	2	0	2	4	4	Engineering	ECE2003
15.	ECE4001	Digital Communication Systems	3	0	2	0	4	Engineering	ECE3001
16.	MAT2002	Applications of Differential and Difference Equations	3	0	2	0	4	Science	MAT1011
17	MAT3004	Applied Linear Algebra	3	1	0	0	4	Science	MAT2002
18	ECE3099	Industrial Internship	0	0	0	0	2	Engineering	None

Program Elective- 37 Credits

L- Lecture

T – Tutorial

P – Practical

J – Project

C - Credits

No.	Course Code	Course Title	L	T	P	J	C	Category	Pre-Requisite
1	ECE1006	Introduction to Nano Science and Nano Technology	2	0	0	4	3	Engineering	PHY1001
2	ECE1007	Optoelectronics	3	0	0	0	3	Engineering	PHY1001
3	ECE1008	Electronics Hardware Trouble Shooting	0	0	2	0	1	Engineering	None
4	ECE2008	Robotics and Automation	2	0	0	4	3	Engineering	ECE1005
5	ECE2010	Control Systems	3	0	0	4	4	Engineering	ECE1004
6	PHY1002	Material Science	3	0	2	0	4	Science	PHY1001
7	ECE3004	Computer Organization and Architectures	3	0	0	0	3	Engineering	ECE2003
8	ECE4002	Advanced Microcontrollers	3	0	0	4	4	Engineering	ECE3003
9	ECE4003	Embedded System Design	2	0	2	4	4	Engineering	ECE3003
10	ECE4004	Embedded C and Linux	3	0	2	4	5	Engineering	ECE3003
11	CSE2003	Data Structures and Algorithms	2	0	2	4	4	Engineering	None
12	CSE2005	Operating Systems	2	0	2	2	4	Engineering	None
13	MAT3005	Applied Numerical Methods	3	1	0	0	4	Science	MAT2002
14	ECE3005	Digital Image Processing	3	0	2	0	4	Engineering	ECE2006
15	ECE3009	Neural Networks and Fuzzy Control	3	0	0	4	4	Engineering	ECE2006
16	ECE3010	Antennas and wave propagation	3	0	0	0	3	Engineering	ECE2004
17	ECE3011	Microwave Engineering	3	0	2	4	5	Engineering	ECE2004
18	ECE4005	Optical Communication and Networks	2	0	2	4	4	Engineering	ECE4001
19	ECE4007	Information Theory and Coding	3	0	0	4	4	Engineering	ECE4001
20	ECE4008	Computer Communication	3	0	2	0	4	Engineering	ECE4001
21	ECE4009	Wireless and Mobile communication	3	0	2	4	5	Engineering	ECE4001
22	ECE4010	Satellite Communication	3	0	0	0	3	Engineering	ECE4001
23	ECE4011	Wireless Sensor Networks	2	0	2	4	4	Engineering	ECE4001
24	ECE4013	Cryptography and Network Security	3	0	0	0	3	Engineering	ECE2005
25	ECE3013	Linear Integrated Circuits	3	0	2	0	4	Engineering	ECE2002

Program Migration Requirements

No	Course Code	Course Title	L	T	P	J	C	Category	Prerequisite
1	ECE1001	Fundamentals of Electrical Circuits	2	0	2	0	3	Engineering	None
2	ECE1002	Semiconductor Devices and Circuits	3	0	2	0	4	Engineering	None

Minor In Electronics Engineering – 15 credits

[Choose ANY FOUR Courses in the given List]

No	Course Code	Course Title	L	T	P	J	C	Category	Prerequisite
1	ECE1002	Semiconductor Devices and Circuits	3	0	2	0	4	Engineering	None
2	ECE2002	Analog Electronic Circuits	2	0	2	4	4	Engineering	ECE1002
3	ECE2003	Digital Logic Design	2	0	2	0	3	Engineering	ECE1002
4	ECE3013	Linear Integrated Circuits	3	0	2	0	4	Engineering	ECE2002
5	ECE3003	Microcontroller and Applications	2	0	2	4	4	Engineering	ECE2003
6	ECE3002	VLSI System Design	3	0	2	0	4	Engineering	ECE2003

Minor In Communication Engineering – 15 credits

[Choose ANY FOUR Courses in the given List]

No	Course Code	Course Title	L	T	P	J	C	Category	Prerequisite
1	ECE1002	Semiconductor Devices and Circuits	3	0	2	0	4	Engineering	None
2	ECE2002	Analog Electronic Circuits	2	0	2	4	4	Engineering	ECE1002
3	ECE3001	Analog Communication Systems	3	0	2	0	4	Engineering	ECE2002
4	ECE4001	Digital Communication Systems	3	0	2	0	4	Engineering	ECE3001
5	ECE4009	Wireless and Mobile communication	3	0	2	4	5	Engineering	ECE4001
6	ECE4008	Computer Communication	3	0	2	0	4	Engineering	ECE4001
7	ECE4007	Information Theory and Coding	3	0	0	4	4	Engineering	ECE4001

B. Tech - ECE (Honors) – 15 Credits

[Choose ANY FOUR / FIVE Courses in the given List to fulfill 15 credits]

No	Course Code	Course Title	L	T	P	J	C	Category	Prerequisite
1	ECE2008	Robotics and Automation	2	0	0	4	3	Engineering	ECE1005
2	ECE3005	Digital Image Processing	3	0	2	0	4	Engineering	ECE2006
3	ECE3009	Neural Networks and Fuzzy Control	3	0	0	4	4	Engineering	ECE2006
4	ECE4010	Satellite Communication	3	0	0	0	3	Engineering	ECE4001
5	ECE4011	Wireless Sensor Networks	2	0	2	4	4	Engineering	ECE4001
6	ECE4013	Cryptography and Network Security	3	0	0	0	3	Engineering	ECE2005