SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY

Electronics and Communication Engineering

B.Tech Course Structure - Autonomous Regulation: 2015-16 (A15)

I Year B. Tech (ECE) – I Sem

S. No.	Subject Code	Subject	L	T	P/D	C	Marks	
							Int.	Ext.
1	**5H101**	English-I	2	-	-	2	25	75
2	**5H111**	Engineering Mathematics – I	3	1	-	3	25	75
3	**5H121**	Engineering Physics – I	3	1	-	3	25	75
4	**5H131**	Engineering Chemistry	2	1	-	2	25	75
5	**5F101**	Computer Programming	3	1	-	3	25	75
6	**5B101**	Engineering Drawing – I	1	1	4	3	25	75
7	**5H171**	English Language Lab – I	-	-	2	1	25	75
8	**5H181**	Engineering Physics Lab-I	-	-	2/2	1	25	75
9	**5H186**	Engineering Chemistry Lab	-	-	2/2	1	25	75
10	**5F171**	Computer Programming Lab	-	-	3	2	25	75
11	**5B171**	Engineering workshop-I	-	-	2/2	1	25	75
12	**5F172**	IT Workshop – I	-	-	2/2	1	25	75
13	**5C191**	Seminar on current affairs/Technical Topic	-	-	2	1	100	-
Total			**14**	**5**	**15**	**24**	**400**	**900**

I Year B. Tech (ECE) – II Sem

S.No.	Subject Code	Subject	L	T	P/D	C	Max Marks	
							Int	Ext
1	**5H202**	English – II	2	2	-	2	25	75
2	**5H213**	Engineering Mathematics – II	3	1	-	3	25	75
3	**5H223**	Applied Physics – I	3	1	-	3	25	75
4	**5E201**	Data Structures and C++	3	1	-	3	25	75
5	**5B202**	Engineering Drawing – II	1	1	2	2	25	75
6	**5H232**	Environmental Chemistry and Ecology	2	1	-	2	25	75
7	**5A242**	Network Analysis	3	1	-	3	25	75
8	**5H233**	Ethics, Values, Positive Thinking and Happiness	1	1	-	1	25	75
9	**5E271**	Data structure and C++Lab	-	-	3	2	25	75
10	**5H282**	Engineering Physics Lab – II	-	-	2/2	1	25	75
11	**5B272**	Engineering Workshop - II	-	-	2/2	1	25	75
12	**5C292**	Seminar on Science and its impact	-	-	2	1	100	-
Total			**18**	**9**	**09**	**24**	**325**	**650**

II Year B. Tech (ECE) – I Sem

S.No.	Subject Code	Subject	L	T	P/D	C	Marks	
							CIE	SEE
1	5H315	Engineering Mathematics-III	3	1	-	3	25	75
2	5C301	Electronic Devices and Circuits	3	1	-	3	25	75
3	5CC02	Switching Theory and Logic Design	3	1	-	3	25	75
4	5C303	Probability Theory and Stochastic Process	3	1	-	3	25	75
5	5CC04	Signals and Systems	3	1	-	3	25	75
6	5BC04	Elements of Mechanical Engineering	3	1	-	3	25	75
7	5H373	Functional Communicative Written English	1	2	-	1	25	75
8	5C371	Electronic Devices & Circuits Lab	-	-	3	2	25	75
9	5CC72	Basic Simulation Lab	-	-	3	2	25	75
10	5C393	Seminar on Technology and Its Impact	-	-	2	1	100	-
Total			**19**	**8**	**8**	**24**	**325**	**675**

II Year B. Tech (ECE) – II Sem

S.No.	Subject Code	Subject	L	T	P/D	C	Marks	
							CIE	SEE
1	5C406	Pulse and Digital Circuits	3	1	-	3	25	75
2	5C405	Analog Communications	3	1	-	3	25	75
3	5C408	Electronic Circuit Analysis	2	2	-	2	25	75
4	5C409	Electromagnetic Theory and Transmission Lines	3	1	-	3	25	75
5	5CC10	Digital Signal Processing	3	1	-	3	25	75
6		**Professional Elective-I**	3	1	-	3	25	75
7	5H474	Effective English Communication (EEC)	-	1	2	1	25	75
8	5C473	PDC & CAD Lab	-	-	3	2	25	75
9	5C474	Analog Communications Lab	-	-	3	2	25	75
10	5C494	Technical Seminar	-	-	2	1	100	-
11	5C486	Comprehensive Viva Voce-I	-	-	-	1	50	50
Total			**17**	**7**	**10**	**24**	**375**	**725**

Professional Elective-I			
S. No.	**Stream**	**Subject Code**	**Subject Name**
1	VLSI Technology	5CC20	HDL based Digital System Design
2	Embedded Systems	5DC03	Computer Organization and Architecture
3	Signal Processing	5C421	Coding Theory and Techniques
4	Computer Science	5EC41	Java Programming
5	Management	5ZC14	Financial Management
6	Manufacturing Engineering	5BC07	Metallurgy and Material Science

III Year B. Tech (ECE) – I Sem

S.No.	Subject Code	Subject	L	T	P/D	C	Marks	
							CIE	SEE
1	5C512	Digital Communications	3	1	-	3	25	75
2	5C513	Microprocessors, Microcontrollers and Applications	3	1	-	3	25	75
3	5AC43	Electrical Technology	3	1	-	3	25	75
4	5C514	Antennas and Wave Propagation	3	1	-	3	25	75
5		**Professional Elective – II**	3	-	-	3	25	75
6		**Open Elective –I**	2	1	-	2	25	75
7	5HC75	Quantitative Aptitude	-	-	2	1	25	75
8	5C676	MPMCA Lab	-	-	4	2	25	75
9	5AC94	Electrical Technology Lab			2	1	25	75
10	5CC75	Digital Signal Processing Lab	-	-	4	2	25	75
11	5C585	Group Project	-	-	2	1	25	75
12	5C599	Summer Internship Evaluation	-	-	-	1	25	75
13	5C595	Technical Literature Review and Seminar –I	-	-	2	1	100	-
Total			**17**	**5**	**16**	**26**	**400**	**900**

Professional Elective-II			
S. No.	**Stream**	**Subject Code**	**Subject Name**
1	VLSI Technology /Advanced Electronics	5C524	Programmable Logic devices
2	Embedded Systems	5C525	Sensors and Actuators
3	Signal Processing	5C526	Multi - Rate Signal Processing
4	Communications	5CC27	Telecommunication Switching Systems &Networks
5	IOT	5DC57	Introduction to Internet of Things

Open Elective-I			
S. No.	**Stream**	**Subject Code**	**Subject Name**
1	Biology	5GC51	Biology for Engineers
2	Management	5ZC03	BOIRM
3	SAP	5EC26	SAP-I : SAP ABAP Workbench Fundamentals
4	Computer Science	5FC32	Data Base Systems
5	Electrical &Electronics	5AC47	Fundamentals of Power Electronics
6	Mechanical	5BC61	Fundamentals of Smart Materials
7	Technology Entrepreneurship	5ZC20	Product and Services
8	Cloud Computing & Analytics	5DC61	Introduction to Cloud computing for IOT
9	Foreign Language	5HC46	Basic German Language
10	Social Sciences Stream	5ZC25	Basics of Indian Economy

III Year B. Tech (ECE) – II Sem

S.No.	Subject Code	Subject	L	T	P/D	C	Marks	
							CIE	SEE
1	5C617	Microwave and Optical Communications	3	1	-	3	25	75
2	5ZC01	Managerial Economics and Financial Analysis	2	1	-	2	25	75
3	5CC16	Linear and Digital IC Applications	3	2	-	3	25	75
4	5GC49	Intellectual Property Rights	1	1	-	1	25	75
5		**Open Elective-II**	2	1	-	2	25	75
6		**Open Elective-III**	2	1	-	2	25	75
7		**Professional Elective-III**	3	-	-	3	25	75
8	5HC77	Logical Reasoning	-	-	2	1	25	75
9	5C677	Digital Communications Lab	-	-	4	2	25	75
10	5CC89	Linear and Digital IC Application Lab	-	-	4	2	25	75
11	5C691	Comprehensive Viva Voce-II	-	-	-	1	50	50
12	5C696	Technical Literature Review and Seminar –II	-	-	2	1	100	-
Total			**16**	**7**	**12**	**23**	**400**	**800**

Open Elective-II

S. No.	Stream	Subject Code	Subject Name
1	Biology	5GC47	Fundamentals of Bio – Informatics
2	Management	5ZC19	Entrepreneurship, Project Management and Structured Finance
3	SAP	5EC27	SAP-II : SAP ABAP Workbench Concepts
4	Computer Science	5EC73	Fundamentals of Operating Systems
5	Electrical &Electronics	5AC44	Fundamentals of Measurements & Instrumentation
6	Mechanical	5BC63	Principles of Operation Research
7	Technology Entrepreneurship	5ZC24	Innovation and Design Thinking
8	Cloud Computing & Analytics	5DC62	Business Analytics for IOT
9	Foreign Language	5HC41	Basic French Language
10	Social Sciences Stream	5ZC26	Basics of Polity and Ecology
Open Elective-III			
1	Biology	5GC48	Biomedical Instrumentation
2	Management	5ZC08	Enterprise Resource Planning
3	SAP	5ZC08	Enterprise Resource Planning-II
4	Computer Science	5FC28 ----------	Data Analytics Network Security and Cryptography
5	Electrical &Electronics	5AC45	Fundamentals of Renewable Energy Sources
6	Mechanical	5BC62	Basic Manufacturing Processes
7	Technology Entrepreneurship	5ZC21	General Management and Entrepreneurship
8	Foreign Language	5HC51	Basic Spanish Language
9	Social Sciences Stream	5ZC27	Indian History, Culture and Geography
	SWAYAM MOOCS Course		
Professional Elective-III			
1	VLSI Technology/ Advanced Electronics	5C629	Structured Digital System Design
2	Embedded Systems	5C630 5C631 5C653	Automotive Electronics Embedded C Programming Developing Embedded IOT Applications
3	Signal Processing	5CC32	Digital Image Processing
4	Communications	5C739	Software Defined Radio
5	IOT	5DC60	Developing IOT with case studies
	SWAYAM MOOCS Course		

Approved SWAYAM MOOCS Courses under Open Elective-III

1. Programming, Data Structure and Algorithms using Python
2. English Language for Competitive Exams
3. Advanced IOT Applications

Approved SWAYAM MOOCS Courses under Professional Elective-III

1. Real Time Operating System
2. Introduction to Coding Theory
3. Principles of Digital Communications

IV Year B. Tech (ECE) – I Sem

S.No.	Subject Code	SUBJECT	L	T	P/D	C	Marks	
							CIE	SEE
1	5C718	VLSI Technology and Design	3	1	-	3	25	75
2	5C719	Cellular and Mobile Communications	3	1	-	3	25	75
3	5EC05	Computer Networks	3	1	-	3	25	75
4	5AC07	Control Systems	3	-	-	3	25	75
5	5C722	Radar Systems	3	-	-	3	25	75
6		**Professional Elective-IV**	3	-	-	3	25	75
7	5C780	Micro Wave and Optical Communications Lab	-	-	4	2	25	75
8	5C782	VLSI TD Lab	-	-	4	2	25	75
9	5C786	Industry Oriented Mini Project	-	-	-	1	25	75
10	5C787	Project –I	-	-	2	3	100	-
11	5C797	Technical Literature Review and Seminar –III	-	-	2	1	100	-
Total			**18**	**3**	**12**	**27**	**450**	**750**

Professional Elective- IV			
1	VLSI Technology/ Advanced Electronics	5C735	Digital Design Through Verilog
2	Embedded Systems	5C736	DSP Processors and Architectures
3	Signal Processing	5C737 5C738	Wavelets Theory and Applications Artificial Neural Networks
4	Communications	5C746 5C740 5C746	Software Defined Networks Spread Spectrum communications MIMO OFDM

IV Year B. Tech (ECE) – II Sem

S.No.	Subject Code	SUBJECT	L	T	P/D	C	Marks	
							CIE	SEE
1	5ZC02	Management Science	3	1	-	3	25	75
2		**Professional Elective-V**	3	-	-	3	25	75
3	5C888	Project -II	-	-	20	12	50	150
4	5C892	Comprehensive Viva Voce-III	-	-	-	1	50	50
5	5C898	Technical Literature Review and Seminar –IV	-	-	2	1	100	-
Total			**6**	**1**	**22**	**20**	**250**	**350**

Professional Elective-V			
1	VLSI Technology	5C841	CMOS Digital IC Design
2	Embedded Systems	5C842	System on-Chip Architecture

		5CC23 5C853	Embedded Real Time operating system Introduction to System Engineering
3	Signal Processing	5CC43	Digital Speech Signal Processing
4	Communications	5C845 5C851 5C852	Wireless Communications and Networks Satellite communications Ad-hoc Wireless Networks