B.Tech. Electronics & Communication Engineering (Specialization : VLSI Chip Design)

Department of Faculty of Engineering and Technology,
Sri Sri University. Cuttack, India

Table of Contents

B.Tech. ECE (Specialization : VLSI Design)						
1st Year						
Course code	Semester – 1	L	T	P	Cr	
Major Courses						
TEC101	Basic Electronics Engg.	2	0	0	2	10
TEC102	Basic Electronics Engg. Lab	0	0	1	1	
TEE101	Basic Electrical Engg.	2	0	0	2	
TEE102	Basic Electrical Engg. Llab	0	0	1	1	
TCS101	Computational Thinking and Problem Solving for Software Development	2	0	0	2	
TCS102	Computational Thinking and Problem Solving for Software Development	0	0	1	1	
TEC103	Engineering Graphics & Design	0	0	1	1	
Minor Courses						
TMN101	Innovation Management(Ex)	3	0	0	3	4
TMN102	Innovation Management lab	0	0	1	1	
Multidisciplinary Courses						
	Engineering Mathematics-1	2	0	0	2	6
	Engineering Mathematics-1 Lab.	0	0	1	1	
	Engineering Chemistry	2	0	0	2	
	Engineering Chemistry Lab.	0	0	1	1	
Ability enhancement course						
	Communicative English	2	0	0	2	3
	Communicative English Lab.	0	0	1	1	
Skill enhancement course						
TSE104	Hand-on Soldering Technician Training Course	0	0	3	3	3
Value added course						
	Happiness Connect program	0	0	2	2	3
TVA101	Sustainable Development Goal	1	0	0	1	
General Proficiency						
TGP101	General Proficiency-I	0	0	0	1	1

Total Credit in 1st Semester – 30

Course code	Semester – 2	L	T	P	Cr	
	Major Courses					
TEE103	Circuit Theory and Network Theory	2	0	0	2	11
TEE104	Circuit Theory and Network Theory Lab	0	0	1	1	
TEC104	Introduction to Digital Systems	2	0	0	2	
TEC105	Digital System Lab	0	0	2	1	
TEE105	Introduction to Sensor & Transducer	2	0	0	2	
TCS110	Programming in C	2	0	0	2	
TCS111	Programming in C lab	0	0	1	1	
	Minor Courses					
TMN103	Entrepreneurship Development(Ex)	3	0	0	3	4
TMN104	Entrepreneurship Development lab	0	0	1	1	
	Multidisciplinary Courses					
	Engineering Physics	2	0	0	2	6
	Engineering Physics Lab.	0	0	1	1	
	Engineering Mathematics-2	2	0	0	2	
	Engineering Mathematics-2 lab	0	0	1	1	
	Ability enhancement course					
TAE103	Design Thinking	2	0	2	4	4
	Skill enhancement course					
TSE110	PCB Design (Foundation)	0	0	1	3	3
	Value added course					
	Green governance	1	0	0	1	1
	General Proficiency					
TGP102	General Proficiency-II	0	0	0	1	1
Students exiting the programme after securing 40 credits will be awarded UG Certificate in the relevant Discipline /Subject provided they secure 4 credits in work based vocational courses offered during summer term or internship / Apprenticeship in addition to 6 credits from skill-based courses earned during first and second Semester.						

Total Credit in 2ⁿᵈ Semester –30

Course code	2nd Year				
	Semester – 3	**L**	**T**	**P**	**Cr**
	Major Courses				
TEC201	Microprocessor & Microcontroller	2	0	0	2	12
TEC202	Microprocessor & Microcontroller Lab	0	0	1	1
TEC203	Embedded System Design / IoT Systems / Sensor Based Systems	2	0	0	2
TEC204	Embedded System Design / IoT Systems / Sensor Based Systems Lab.	0	0	1	1
TEE201	Introduction to Measurement	2	0	0	2
TEE202	Measurement Lab	0	0	1	1
TEE203	Control System-1	2	0	0	2
TEE204	Control System-1 lab	0	0	1	1
	Minor Courses				
TMN201	Python Programming	3	0	0	3	7
TMN202	Python Programming Lab	0	0	1	1
	Multidisciplinary Course				
	Engineering mathematics -3	3	0	0	3
	Skill enhancement course				
TSE204	PCB Design (Advance)	0	0	3	3	3
	Value Added				
TVA201	Disaster Management	0	0	1	1	1
	Summer Internship				
TSI201	Internship	0	0	2	2	2
	General Proficiency				
TGP201	General Proficiency-III	0	0	0	1	1

Total Credit in 3rd Semester - 26

	Semester – 4	L	T	P	Cr	
	Major Courses					
TEC205	Digital Signal Processing	3	0	0	3	14
TEC206	Digital Signal Processing Lab	0	0	1	1	
TEC207	CMOS Integrated Circuits	2	0	0	2	
TEC208	CMOS Integrated Circuits Lab	0	0	1	1	
TEC209	VLSI and SOC Design	3	0	0	3	
TEC210	VLSI and SOC Design Lab.	0	0	1	1	
TEC211	Design Verification using simulation/emulation and formal Methods	2	0	0	2	
TEC212	Design Verification using simulation/emulation and formal Methods Lab.	0	0	1	1	
	Minor Courses					
TMN203	Introduction to AIML (RD-2)	3	0	0	3	4
TMN204	Introduction to AIML Lab	0	0	1	1	
	Skill Enhancement Courses					
TSE206	Minor Project	0	0	2	2	2
	Value Added					
TVA202	Constitution of India	0	0	1	1	1
	General Proficiency					
TGP202	General Proficiency-IV	0	0	0	1	1

Students exiting the programme after securing minimum 80 credits will be awarded UG diploma in the relevant Discipline /Subject provided they secure 4 credits in work based vocational courses offered during summer term or internship / Apprenticeship during 1st year or second year summer term

Total Credit in 4th Semester - 22

Course code	Semester – 5	L	T	P	Cr	
	3rd Year					
	Major Courses					
TEC301	Compound semiconductors Basics (RF, Power Electronics, Etc)	3	0	0	3	14
TEC302	Compound semiconductors Basics (RF, Power Electronics, Etc) lab.	0	0	1	1	
TEC303	Low Power/High Frequency Designs	2	0	0	2	
TEC304	Low Power/High Frequency Designs Lab.	0	0	1	1	
TEC305	Semiconductor Devices (Architecture, Design, Analysis)	3	0	0	3	
TEC306	Semiconductor Devices (Architecture, Design, Analysis) Lab.	0	0	1	1	
TEE301	Electromagnetic Field Theory	2	0	0	2	
TEE302	Electromagnetic Field Theory lab	0	0	1	1	
	Minor Courses					
TMN301	Deep Learning	3	0	0	3	4
TMN302	Deep Learning Lab	0	0	1	1	
	Value Added					
	Vedic Mathematics	0	0	1	1	**1**
	Internship					
TSI301	Internship			2	**2**	**2**
	Ability enhancement course					
TAE301	Employability planning and preparation – 1	0	0	1	1	1
	General Proficiency					
TGP301	General Proficiency-V	0	0	0	1	1

Total Credit in 5th Semester – 23

Course code	Semester – 6	L	T	P	Cr	
Major Courses						
TEC307	CAD for VLSI including use of AI/ML in VLSI Design	3	0	0	3	14
TEC308	CAD for VLSI including use of AI/ML in VLSI Design Lab	0	0	1	1	
TEC309	FPGA Design	3	0	0	3	
TEC310	FPGA Design Lab	0	0	1	1	
TEC311	Standard Design Elements (Std. Cells, IOs) and Protocols (USB, DDR, EMMC, MIPI etc)	3	0	0	3	
TEC312	Standard Design Elements (Std. Cells, IOs) and Protocols (USB, DDR, EMMC, MIPI etc) Lab.	0	0	1	1	
TEC313	Semiconductor packing Technology	2	0	0	2	
Minor Courses						
TMN303	Computational linguistics & NLP	3	0	0	3	4
TMN304	Computational linguistics & NLP Lab	0	0	1	1	
Ability enhancement course						
TAE302	Employability planning & preparation – II	0	0	1	1	1
Value Added						
TVA301	Universal Human Value	0	0	0	1	1
Skill Enhancement Course						
TSE301	Major project (Implementation & presentation)	0	0	2	2	2
General Proficiency						
TGP302	General Proficiency	0	0	0	1	1

Total Credit in 6th Semester - 23

	4th Year					
Course code	**Semester – 7**	**L**	**T**	**P**	**Cr**	
	Major Courses					
	HONs Degree					12
TEC401	AI/ML Architectures and Chips Design for Training & Inference	3	0	0	3	
TEC402	AI/ML Architectures and Chips Design for Training & Inference Lab	0	0	1	1	
TEC403	Advanced Power Electronics Devices & Circuits (GaN, SiC, Others)	3	0	0	3	
TEC404	Advanced Power Electronics Devices & Circuits (GaN, SiC, Others) Lab	0	0	1	1	
TEC405	Sensors for Imaging and other applications	3	0	0	3	
TEC406	Sensors for Imaging and other applications	0	0	1	1	
	Minor Courses					
TMN401	Opportunity Spotting and evaluation(Ex)	3	0	0	3	4
TMN402	Opportunity Spotting and evaluation lab	0	0	1	1	
	Ability Enhancement Course					
RM-1	Research Methodology-1	2	0	0	2	2
	Internship					
TSI401	Summer Internship	0	0	3	3	3
	Skill Enhancement					
TSE402	RTL & Physical Design	0	0	3	3	3
	General Proficiency					
TGP401	**General Proficiency-VII**	0	0	0	1	1
	Value added Course					
	Indian Knowledge system	**0**	**0**	**1**	1	1

Total Credit in 7th Semester – 26

Course code	Semester – 8	L	T	P	Cr	
	Major Courses					
TEC407	Thin Film Transistors	3	0	1	4	16
TRP401	**Research project in relevant specialization (The research outcomes of their project work may be published in peer-reviewed journals or may be presented in conferences/seminars or may be patented)**				12	
	Minor Courses					
TMN403	Industry and Market Research (Ex)	3	0	0	3	4
TMN404	Industry and Market Research LAB	0	0	1	1	
	General Proficiency					
TGP402	**General Proficiency**	**0**	**0**	**0**	1	1
	B.Tech. (Honours with research) in Electronics and Communication and Engg. (Specialization : VLSI Design)					

Total Credit in 8ᵗʰ Semester - 21

1. Generic Elective can also be opted from Swayam Portal and students should produce Grade certificate on successful completion of the course but the content should not match with the courses offered under the curriculum.

2. General Proficiency (General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participation in events(conferences/Worksop/training/webinar/seminar) ,competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.)

General Course Structure of B. Tech. (Electronics & Communication Engg.)

Major Courses

Sl. No	Course Code	Core Course	L	T	P	Cr
1	TEC101	Basic Electronics Engg.	2	0	0	2
2	TEC102	Basic Electronics Engg. Lab	0	0	1	1
3	TEE101	Basic Electrical Engg	2	0	0	2
4	TEE102	Basic Electrical lab	0	0	1	1
5	TCS110	Programming Logic-C	2	0	0	2
6	TCS111	Programming Logic-C Lab	0	0	1	1
7	TEC103	Engineering Graphics & Design	0	0	2	1
8	TEE103	Circuit Theory and Network Theory	2	0	0	2
9	TEE104	Circuit Theory and Network Theory Lab	0	0	1	1
10	TEE105	Introduction to Sensor & Transducer	2	0	0	2
11	TCS101	Computational thinking and problem solving	2	0	0	2
12	TCS101	Computational thinking and problem solving Lab	0	0	1	1
13	TEE201	Introduction to Measurement	2	0	0	2
14	TEE202	Measurement Lab	0	0	1	1
15	TEE203	Control System-1	2	0	0	2
16	TEE204	Control System-1 lab	0	0	1	1
17	TEE203	Digital Signal processing	2	0	0	2
18	TEE204	Digital Processing Lab	0	0	1	1
19	EECT102	Introduction to Digital Systems	2	0	0	2
20	EECP102	Digital SYSTEM Lab	0	0	2	1
Sl. No	**Course Code**	**Elective Courses**	**L**	**T**	**P**	**Cr**
1	TEC201	Microprocessor & Microcontroller	2	0	0	2
2	TEC202	Microprocessor & Microcontroller Lab	0	0	1	1
3	TEC203	Embedded System Design / IoT Systems / Sensor Based Systems	2	0	0	2
4	TEC204	Embedded System Design / IoT Systems / Sensor Based Systems Lab.	0	0	1	1
5	TEC207	CMOS Integrated Circuits	2	0	0	2

			L	T	P	Cr
6	TEC208	CMOS Integrated Circuits Lab	0	0	1	1
7	TEC305	Semiconductor Devices (Architecture, Design, Analysis)	2	0	0	2
8	TEC306	Semiconductor Devices (Architecture, Design, Analysis) Lab.	0	0	1	1
9	TEC209	VLSI and SOC Design	3	0	0	3
10	TEC210	VLSI and SOC Design Lab.	0	0	1	1
11	TEC211	Design Verification using simulation/emulation and formal Methods	2	0	0	2
12	TEC212	Design Verification using simulation/emulation and formal Methods Lab.	0	0	1	1
13	TEC301	Compound semiconductors Basics (RF, Power Electronics, Etc)	3	0	0	3
14	TEC302	Compound semiconductors Basics (RF, Power Electronics, Etc) lab.	0	0	1	1
15	TEC303	Low Power/High Frequency Designs	2	0	0	2
16	TEC304	Low Power/High Frequency Designs Lab.	0	0	1	1
17	TEC305	Semiconductor Devices (Architecture, Design, Analysis)	3	0	0	
18	TEC306	Semiconductor Devices (Architecture, Design, Analysis) Lab.	0	0	1	1
19	TEC307	CAD for VLSI including use of AI/ML in VLSI Design	2	0	0	2
20	TEC308	CAD for VLSI including use of AI/ML in VLSI Design Lab	0	0	1	1
21	TEC309	FPGA Design	2	0	0	2
22	TEC310	FPGA Design Lab	0	0	1	1
23	TEC311	Standard Design Elements (Std. Cells, IOs) and Protocols (USB, DDR, EMMC, MIPI etc)	2	0	0	2
24	TEC312	Standard Design Elements (Std. Cells, IOs) and Protocols (USB, DDR, EMMC, MIPI etc) Lab.	0	0	1	1
25	TEC313	Semiconductor packing Technology	2	0	0	2
Sl. No	**Course Code**	**Honours Courses**	**L**	**T**	**P**	**Cr**
1	TEC401	AI/ML Architectures and Chips Design for Training & Inference	3	0	0	3
2	TEC402	AI/ML Architectures and Chips Design for Training & Inference Lab	0	0	1	1

3	TEC403	Advanced Power Electronics Devices & Circuits (GaN, SiC, Others)	3	0	0	3
4	TEC404	Advanced Power Electronics Devices & Circuits (GaN, SiC, Others) Lab	0	0	1	1
5	TEC405	Sensors for Imaging and other applications	3	0	0	3
6	TEC406	Sensors for Imaging and other applications	0	0	1	1

Minor courses

Minor (Relevant Discipline Baskets)

Sl. No	Course Code	Minor Course	L	T	P	Cr
		AIML Basket				
1	TAI103	Foundations to AI-ML	3	0	1	4
2	TAI201	Machine learning	3	0	1	4
3	TAI303	Computational lingustics & NLP	3	0	1	4
4	TAI405	Pattern recognition & Anamoly detection	3	0	1	4
		Data science Basket				
1	TDS103	Python for Data science and visualization	3	0	1	4
2	TDS301	Descriptive analytics	3	0	1	4
3	TDS203	Data Warehousing and Multidimensional Modeling	3	0	1	4
4	TDS401	Social and web analytics	3	0	1	4
		Cyber Security Basket				
1	TCC103	Network security	3	0	1	4
2	TCC201	Practical approah to cyber security	3	0	1	4
3	TCC403	Current trends in technology & its security & forensics aspects	3	0	1	4
4	TCC305	Cryptography	3	0	1	4
		Java Full stack Basket				
1	TFS203	UI/UX	3	0	1	4
2	TFS301	Backend Framework and API (Spring Boot & Micro Services)	3	0	1	4
3	TFS303	Adv Js framework using React.js (	3	0	1	4
4	TFS403	Android App Development	3	0	1	4

Minor (General Discipline Baskets)

Sl. No	Course Code	Minor Course	L	T	P	GP	Cr
		Innovation and Entrepreneurship	3	0	0	1	4
1	TMN103	Enterpenureship Development	3	0	0	1	4
2	TMN101	Innovation Management	3	0	0	1	4
3	TMN301	Opportunity Spotting and evaluation	3	0	0	1	4
4	TMN401	Industry and Market Research	3	0	0	1	4
		HR Management					
1		Human Resource Management: HR for People Managers	3	0	0	1	4
2		Senior Professional in Human Resources	3	0	0	1	4
3		HR Management and Analytics	3	0	0	1	4
4		Urban Environmental Governance (Smart and Eco cities)	3	0	0	1	4
		Financial Management					
1		Principles of Accounting	3	0	0	1	4
2		Financial Modeling	3	0	0	1	4
3		Business Intelligence	3	0	0	1	4
4		Managerial Economics	3	0	0	1	4
		Marketing Management					
1		Principles of Marketing Management	3	0	0	1	4
2		Digital and social media Marketing	3	0	0	1	4
3		Business strategy	3	0	0	1	4
4		Social media management	3	0	0	1	4

		General Proficiency					
	TGP101	General Proficiency	0	0	1	1
	TGP102	General Proficiency	0	0	1	1
	TGP201	General Proficiency	0	0	1	1
	TGP202	General Proficiency	0	0	1	1
	TGP301	General Proficiency	0	0	1	1
	TGP302	General Proficiency	0	0	1	1
	TGP401	General Proficiency	0	0	1	1
	TGP402	General Proficiency	0	0	1	1

(General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participation in events(conferences/Worksop/training/webinar/seminar) ,competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.)

Skill courses

Sl. No	Course Code	Skill Course	L	T	P	Cr
1	TSE104	Hand-on Soldering Technician Training Course	0	0	3	3
2	TSE110	PCB Design (Foundation)	0	0	1	3
3	TSE204	PCB Design(Advanced)	0	0	3	3
4	TSE206	Minor Project	0	0	2	2
5	TSE301	Major Project	0	0	2	2
6	TSE402	RTL & Physical Design	0	0	3	3
7	TSE112	Engineering workshop (Soldering of PCB with Design and Fabrication)	0	0	3	3
8	TSE113	Engineering Graphics and Design	0	0	3	3
9	TSE114	Digital Literacy and Computational Thinking	0	0	3	3
10	TSE115	Foundation Course on MATLAB	0	0	3	3
11	TSE116	Prototyping and Bread boarding	0	0	3	3
12	TSE117	Circuit Debugging and Troubleshooting	0	0	3	3
13	TSE207	Microcontroller Programming and Interfacing	0	0	3	3
14	TSE208	Wireless Communication Protocols:	0	0	3	3
15	TSE209	Digital Embedded System (Foundation)	0	0	3	3
16	TSE210	Digital Embedded System (Advanced)	0	0	3	3

Multi-disciplinary courses

Sl. No	Course Code	Multidisciplinary Course	L	T	P	Cr
		Engineering Mathematics-1	2	0	0	2
		Engineering Mathematics-1 Lab.	0	0	1	1
		Engineering Chemistry	2	0	0	2
		Engineering Chemistry Lab.	0	0	1	1
		Engineering Mathematics-2	2	0	0	2
		Engineering Mathematics-2 Lab.				
		Engineering Mathematics-3	3	0	0	3
		Engineering Physics	2	0	0	2
		Engineering Physics Lab.	0	0	1	1
		General Biology	2	0	0	2
		General Biology Lab	0	0	1	1

Ability Enhancement Course (AEC)					
Course Code	Ability Enhancement Course	L	T	P	Cr
	Communicative English-1	2	0	0	2
	Communicative English-1 Lab.	0	0	1	1
TAE103	Design Thinking	2	0	2	4
TAE301	Employability planning and preparation – 1	0	0	1	1
TAE302	Employability planning & preparation – II	0	0	1	1
	Research Methodology-1	2	0	0	2
	Arabic Language	1	0	1	2
	French	1	0	1	2
	German	1	0	1	2

Value-added courses

Sl. No	Course Code	Value-added Courses	L	T	P	Cr
1		Essence of Indian knowledge and Tradition (Happiness Connect program)	0	0	2	2
2		Induction program	0	0	0	1
		Green governance	1	0	0	1
		Happiness Connect program	0	0	2	2
	TVA101	Sustainable Development Goal	1	0	0	1
3		Disaster management	0	0	1	1
5		Environmental Science	2	0	0	2
6		Constitution of India	1	0	0	1
7	TVA301	Universal Human Value	0	0	0	1
8		Circular Economy	1	0	0	1
9		Vedic mathematics	1	0	0	1
	TAE201	Engineering Ethics & human values	1	0	0	1
	TVA202	Constitution of India	0	0	1	1
		Indian Knowledge system	0	0	1	1

Optional (Any one can be opted)

Second Major

(Computer science and Engineering)

Sl. No.	Course Code	Courses	L	T	P	Cr
1	TCS103	Python Programming	3	0	1	4
2	TCS104	Data structure using 'C'	3	0	1	4
3	TCS201	Computer Organization and Architecture	3	0	1	4
4	TCS203	Object oriented programming using java	3	0	1	4
5	TDS101	Data Analytics	3	0	1	4
6	TCS305	Database Engineering	3	0	1	4
7	TCS207	Computer Networks	3	0	1	4
8	TCS209	Operating Systems	3	0	1	4
9	TCS301	Internet and web technology	3	0	1	4
10	TCS303	Theory Of Computation	3	0	1	4
11	TCS205	Algorithm design and analysis	3	0	1	4
12	TCS307	Project management for professionals	3	0	1	4
13	TAI103	Foundations to AI-ML (IBM)	3	0	1	4
14	TAI201	Machine learning	3	0	1	4
15	TDS203	Datawarehouse and multi-dimentional modeling	3	0	1	4
16	TDS303	Predictive analytics	3	0	1	4

Second major (Mechatronics)						
Sl. No	Course Code	Courses	L	T	P	Cr
1	TMC203	Machine Design and Manufacturing Processes	3	0	1	4
2	TMC205	Applied Thermodynamics,	3	0	1	4
3	TMC301	Fluid Mechanics and Kinematics & Dynamics of Machines	3	0	1	4
4	TMC303	Theory of Finite Element Methods,	3	0	1	4
5	TMC101	Engg. Mechanics	3	0	1	4
6	TEE209	Digital Control System-I	3	0	1	4
7	TMC401	EV Data Analytics & Cyber Security	3	0	1	4
8	TMC403	Industrial Automation & Robotics	3	0	1	4
9	TMC314	Automotive Chassis	3	0	1	4
10	TMC315	Basic Concepts of Mechatronics	3	0	1	4
11	TMC316	Strength of Materials	3	0	1	4
12	TMC317	Electrical Machines	3	0	1	4
13	TMC318	Embedded Systems	3	0	1	4
14	TMC309	Kinematics and Theory of Machines	3	0	1	4
15	TMC406	Design of Machine Elements	3	0	1	4
16	TMC407	Computer Aided Manufacturing	3	0	1	4

Second major (Electrical Engineering)

Sl. No	Course Code	Core Course	L	T	P	Cr
1	TEE303	Power Electronics	3	0	1	4
2	TEE213	Electrical Measurement & Instrumentation	3	0	1	4
3	TEE209	Power System protection and switchgear	3	0	1	4
4	TEE316	Electric Power Transmission and Distribution	3	0	1	4
5	TEE311	Industrial Automation and Control	3	0	1	4
6	TEE317	Vehicle Dynamics	3	0	1	4
7	TEE318	Electric Drives	3	0	1	4
8	TEE319	Renewable Power Generation Systems	3	0	1	4
9	TEE214	Power Systems – I (Apparatus and Modelling)	3	0	1	4
10	TEE215	Power Systems – II (Operation and Control)	3	0	1	4
11	TEE401	Vehicle Dynamics	3	0	1	4
12	TMC403	Automotive Electrical and Electronics System	3	0	1	4
13	TEE407	Automotive Pollution and Control	3	0	1	4
14	TEE408	Vehicle Body Engineering	3	0	1	4
15	TEE307	Design of Vehicle Components	3	0	1	4
16	TEE410	Optimization in Engineering	3	0	1	4

Breakup of Credits

Sl. No	Category	Breakup of Credits
1	Major Elective	103
2	Minor Elective	32
3	Multidisciplinary	15
4	Ability Enhancement Courses (AEC)	11
5	Skill Enhancement Courses (SEC)	16
6	Value Added Courses common for all UG	9
7	Summer Internship	7
8	General Proficiency	8
	Total	201

General Proficiencyshall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.