B. Tech. In Computer Science & Engineering

Specialization in: Cyber Security and CyberDefence (Apprentice Embedded)

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General Course Structure of B. Tech. (Computer Science & Engg.)

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Apprentice Embedded B.Tech in CSE(Spl.- CyberSecurity & Cyber Defence)					
Course code	**Semester – 1**	**L**	**T**	**P**	**Cr**
Major Courses					
TCS103	Computational Thinking and Problem Solving for Software Development using C	2	0	0	2
TCS104	Computational Thinking and Problem Solving for Software Development using 'C'	0	0	1	1
TEC101	Basic Electronics	2	0	0	2
TEC102	Basic Electronics Lab	0	0	1	1
TCS103	Python Programming	3	0	0	3
TCS104	Python Programming Lab.	0	0	1	1
TCC107	Network and OS Security Advanced (Windows, Ubuntu, Kali, Active Directory) (Cyber Dojo)	2	0	0	2
TCC108	Network and OS Security Advanced (Windows, Ubuntu, Kali, Active Directory) Lab	0	0	1	1
Minor Courses					
TCC109	Advanced IT Land scape (Cyber Dojo)	3	0	0	3
TCC110	Advanced IT Land scape Lab	0	0	1	1
Multidisciplinary Courses					
MAT103	Engineering Mathematics-1	2	0	0	2
MAT104	Engineering Mathematics-1 Lab.	0	0	1	1
PHY109	Engineering Physics	2	0	0	2
PHY110	Engineering Physics Lab.	0	0	1	1
Ability enhancement course					
	Communicative English-1	1	0	0	1
	Communicative English-I Lab.	0	0	1	1
Skill enhancement course					
TSE189	Branding and Marketing(Cyber Dojo)	3	0	0	3
Value added course					
	Happiness Connect program	0	0	2	2
TVA101	Sustainable Development Goal	1	0	0	1
General Proficiency					
TGP101	General Proficiency-I General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conference/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	0	0	1	1
Total Credit					**32**

Course code	Sem – 2	L	T	P	Cr
MajorCourses					
TCS104	Data structure using 'C'	2	0	0	2
TCS105	Data structure using 'C' Lab.	0	0	1	1
TEE101	Basic Electrical	2	0	0	2
TEE102	Basic Electrical Lab	0	0	1	1
TCC111	Network Defence (Cyber Dojo)	2	0	0	2
TCC112	Network Defence Lab. (Cyber Dojo)	0	0	1	1
TCC113	End Point Security (Cyber Dojo)	2	0	0	2
TCC114	End Point Security Lab(Cyber Dojo)	0	0	1	1
Minor Courses					
TCC115	Networking from security Perspective (Cyber Dojo)	3	0	0	3
TCC116	Networking from security Perspective Lab(Cyber Dojo)	0	0	1	1
Multidisciplinary Courses					
MAT105	Engineering Mathematics-2	3	0	0	2
MAT106	Engineering Mathematics-2 Lab.	0	0	1	1
Ability enhancement course					
TAE103	Design Thinking & Strategic Innovation	2	0	0	2
TAE104	Design Thinking & Strategic Innovation Lab.	0	0	2	2
Skill enhancement course					
TSE185	Digital Marketing	3	0	0	3
Value added course					
	Green Governance	2	0	0	2
General Proficiency					
TGP102	General Proficiency-II General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conference/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	0	0	1	1
Total Credit					**29**

UG Certificate in Cyber Security & Cyber Defence

2nd Year					
Course code	**Sem – 3**	**L**	**T**	**P**	**Cr**
Major Courses					
TCS201	Computer Organization and Architecture	3	0	0	3
TCS202	Computer Organization and Architecture Lab.	0	0	1	1
TCS203	Object oriented programming using java	3	0	0	3
TCS204	Object oriented programming using java using java Lab.	0	0	1	1
TCC208	Compliance & Data Protection (Cyber Dojo)	2	0	0	2
TCC209	Compliance & Data Protection Lab(Cyber Dojo)	0	0	1	1
TCC210	Network Analysis (Cyber Dojo)	2	0	0	2
TCC211	Network Analysis Lab (Cyber Dojo)	0	0	1	1
TCS205	Algorithm design and analysis	3	0	0	3
TCS206	Algorithm design and analysis. Lab.	0	0	1	1
Minor Courses					
TMN101	Innovation Management	3	0	0	3
TMN102	Innovation Management Lab.	0	0	1	1
Skill enhancement course					
TSE241	Pre Sales	3	0	0	3
	Multidisciplinary course				
MAT203	Engineering Mathematics-3	3	0	0	3
Summer Internship					
TSI201	Internship	0	0	0	2
	Value added courses				
TVA201	Disaster management	0	0	1	1
	General Proficiency				
TGP201	General Proficiency – III General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conference/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	0	0	1	1
	Total Credit				**32**

Course code	Sem – 4	L	T	P	Cr
Major Courses					
TCC212	Social Engineering & Physical Security (Cyber Dojo)	2	0	0	2
TCC213	Social Engineering & Physical Security Labs (Cyber Dojo)	0	0	1	1
TCC214	Network & Systems VA/PT (Cyber Dojo)	2	0	0	2
TCC215	Network & Systems VA/PT Labs (Cyber Dojo)	0	0	1	1
TCC216	Post Exploitation & Advance Tech (Cyber Dojo)	2	0	0	2
TCC217	Post Exploitation & Advance Tech Labs (Cyber Dojo)	0	0	1	1
TCS209	Operating Systems	3	0	0	3
TCS210	Operating Systems Lab.	0	0	1	1
Minor Courses					
TMN103	Entrepreneurship Development	3	0	0	3
TMN104	Entrepreneurship Development Lab	0	0	1	1
Skill Enhancement Course					
TSE206	Minor Project	0	0	2	2
Value Added Course					
TVA202	Constitution of India	2	0	0	2
General Proficiency					
TGP202	General Proficiency-IV General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conference/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	0	0	1	1
Total credit					**22**
UG Diploma in Cyber Security & Cyber Defence					

Course code	Sem – 5	L	T	P	Cr
3rd Year					
Major Courses				
TCS301	Internet and web technology	3	0	0	2
TCS302	Internet and web technology lab.	0	0	1	1
TCS305	Database Engg.	3	0	0	3
TCS306	Database Engg Lab.	0	0	1	1
TCC309	Threat Analytics (Cyber Dojo)	2	0	0	2
TCC310	Threat Analytics Labs (Cyber Dojo)	0	0	1	1
TCC311	Advanced Security Ops (Cyber Dojo)	2	0	0	2
TCC312	Advanced Security Ops Labs (Cyber Dojo)	0	0	1	1
	Minor Courses				
TCC313	Incident Response & Redressal (Cyber Dojo)	3	0	0	3
TCC314	Incident Response & Redressal Lab (Cyber Dojo)	0	0	1	1
	Internship/Skill				
TSI301	Internship/Apprenticeship	0	0	2	2
	Ability enhancement course				
TAE301	Employability planning and preparation – I	0	0	1	1
	Value Added Course				
	Vedic Math	0	0	1	1
	General proficiency				
TGP301	General proficiency-V General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conference/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	0	0	1	1
Total Credit in 5th Semester					**22**

Course code	Sem – 6	L	T	P	Cr
Major Courses					
TCS307	Project Management for Professionals	3	0	0	3
TCS308	Project management for professionals Lab	0	0	1	1
TCC315	Cloud Security (Cyber Dojo)	2	0	0	2
TCC316	Cloud Security Lab (Cyber Dojo)	0	0	1	1
TCC307	Web application security .(Cyber Dojo)	2	0	0	2
TCC308	Web application security Lab.(Cyber Dojo)	0	0	1	1
TCC305	Cryptography	2	0	0	2
TCC306	Cryptography Lab	0	0	1	1
Minor Courses					
TMN301	Opportunity Spotting & Evaluation	3	0	0	3
TMN302	Opportunity Spotting & Evaluation Lab	0	0	1	1
Skill Enhancement courses					
TSE301	Major Project (Implementation & Presentation)	0	0	2	2
TSE302	Internship/Apprenticeship	0	0	2	2
Ability Enhancement course					
TAE302	Employability planning and preparation -II	0	0	1	1
Value added course					
TVA301	Universal Human values	0	0	1	1
General Proficiency					
TGP302	General Proficiency-VI General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conference/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	0	0	1	1
Total Credit					**24**

4th Year					
Course code	**Sem – 7**	**L**	**T**	**P**	**Cr**
Major Courses					
	HONs Degree				
TCC409	OT/IOT/SCADA Security (CyberDojo)	3	0	0	3
TCC410	OT/IOT/SCADA Security Labs (CyberDojo)	0	0	1	1
TCC411	Cognitive Security	3	0	0	3
TCC412	Cognitive Security Lab	0	0	1	1
TCC405	Red Teaming (Cyber Dojo)	3	0	0	3
TCC406	Red Teaming Lab. (Cyber Dojo)	0	0	1	1
Minor Courses					
TCC413	Bug Bounty	4	0	0	4
Ability Courses					
	Research Methodology -1	2	0	0	2
Summer Internship					
TSI401	Internship/Apprenticeship	0	0	3	3
Value added course					
	Indian knowledge System	0	0	1	1
General Proficiency					
TGP401	General Proficiency-VII General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conference/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	0	0	1	1
Total Credit					**23**

Course code	Sem – 8	L	T	P	Cr
Major Courses					
TCC407	Biometric Security (Blended Mode)	3	0	0	3
TCC408	Biometric Security Lab.	0	0	1	1
Minor Courses					
TMN401	Industry and Market Research	3	0	0	3
TMN402	Industry and Market Research Lab	0	0	1	1
Research Project / Dissertation/Apprenticeship					
TPR401	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.)	0	0	12	12
	General Proficiency				
TGP402	General proficiency-VIII General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conference/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	0	0	1	1
	Total credit				**21**
B.Tech. (Honours with Research) in Computer Science and Engg. (Specialization in Cyber Security Cyber Defence)					

B.Tech. Computer Science & Engineering

NEP Structure
Cyber Security and Cyber Defence
(Apprentice Embedded)

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

Major Courses

Sl. No	Course Code	Core Course	L	T	P	Cr
1	TCS101	Computational Thinking and ProblemSolving for Software Development using 'C'.	2	0	1	3
2	TEC101	Basic Electronics	2	0	1	3
3	TCS103	Python Programming	3	0	1	4
4	TAI103	Foundations to AI-ML	3	0	1	4
5	TCS104	Data structure using 'C'	3	0	1	4
6	TEE101	Basic Electrical	2	0	1	3
7	TCS201	Computer Organization and Architecture	3	0	1	4
8	TCS203	Object oriented programming using java	3	0	1	4
10	TCS305	Database Engineering	3	0	1	4
11	TCS207	Computer Networks	3	0	1	4
12	TCS209	Operating Systems	3	0	1	4
13	TCS211	Discrete mathematics	2	0	1	3
14	TCS301	Internet and web technology	3	0	1	4
15	TCS303	Theory Of Computation	3	0	1	4
16	TCS205	Algorithm design and analysis	3	0	1	3
17	TCS307	Project management for professionals	3	0	1	4
18	RM1	Research methodology-1	2	0	1	3
	TCS309	Compiler Design	2	0	1	3
20						

	Course Code	Elective Courses (Specialization)	L	T	P	Cr
1	TAI103	Foundations to AI-ML (IBM)	2	0	1	3
2	TAI201	Machine learning	3	0	1	4
3	TAI203	Application of Machine Learning in Industries (IBM)	2	0	1	3
4	TAI301	Deep learning	3	0	1	4
5	TCS407	IOT and Automation	2	0	1	3
6	TAI101	Python for Machine learning	2	0	1	3
7	TAI303	Computational Linguistics andNatural Language Processing (IBM)	3	0	1	4
8	TDS101	Data Analytics (IBM)	3	0	1	4
9	TDS103	Python for Data science & viasualization	3	0	1	4
10	TDS203	Datawarehouse and multi-dimentional modeling	3	0	1	4

Sl. No	Course Code	Course	L	T	P	Cr
11	TDS301	Descriptive analytics	3	0	1	4
12	TDS303	Predictive analytics	3	0	1	4
13	TDS405	Social and web analytics	3	0	1	4
14	TFS203	UI/UX (L& T)	3	0	1	4
15	TFS301	Server side deployment and database(L&T)	2	0	1	3
16	TFS301	Backend Framework and API (Spring Boot & Micro Services) (L&T)	3	0	1	4
17	TFS303	Adv Js framework using React.js Lab (L&T)	3	0	1	4
18	TFS305	Testing and deployment(L&T)	3	0	1	4
19	TCC101	Fundamentals of network and OS(Bridge system)	0	0	1	1
20	TCC102	IT Land scape (Cyber Dojo)	0	0	1	1
21	TCC103	Network security(Bridge system)	2	0	1	3
22	TCC105	Information security	2	0	1	3
23	TCC201	Practical approah to cyber security(TCS)	2	0	1	3
24	TCC203	Cyber defence (Bridge system)	0	0	1	1
25	TCC206	Advanced cyber security (TCS)	2	0	1	3
26	TCC204	Incident response and redressal	2	0	1	3
27	TCC303	Penetration testing (Bridge System)	2	0	1	3
28	TCC305	Cryptography (TCS)	2	0	1	3
29	TCC308	Web application security .(Bridge)	2	0	1	3
Sl. No	Course Code	Honours Courses	L	T	P	Cr
1	TAI405	Pattern recognition & Anamoly detection	3	0	1	4
2	TAI401	High Performance Computing	3	0	1	4
3	TAI403	Generative AI and prompt engg.	3	0	1	4
4	TDS401	Social and web analytics	3	0	1	4
5	TDS403	Big Data Analytics	3	0	1	4
7	TFS401	Angular JS	3	0	1	4
8	TFS403	Android App Development	3	0	1	4
9	TFS405	Web services using Adv. Java	3	0	1	4

10	TCC401	IoT Security Testing & It's Applications (TCS)	3	0	1	4
11	TCC403	Current trends in technology & its security & forensics aspects	3	0	1	4
12	TCC405	Red Teaming (Bridge Systems)	3	0	1	4
	TCC407	OT/IOT/SCADA Security (CyberDojo)	3	0	1	4
	TCC409	Cognitive Security	3	0	1	4

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

		Apprentice Embedded Cyber Security Basket				
	TCC109	Advanced IT Land scape (Cyber Dojo)	3	0	0	3
	TCC110	Advanced IT Land scape Lab	0	0	1	1
	TCC115	Networking from security Perspective (Cyber Dojo)	3	0	0	3
	TCC116	Networking from security Perspective Lab(Cyber Dojo)	0	0	1	1
	TCC313	Incident Response & Redressal (Cyber Dojo)	3	0	0	3
	TCC314	Incident Response & Redressal Lab (Cyber Dojo)	0	0	1	1
	TCC413	Bug Bounty	4	0	0	4

Minor (General Discipline Baskets)

Sl. No	Course Code	Minor Course	L	T	P	GP	Cr
		Inovation and Enterpenurship	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

Sl. No	Course Code	General Proficiency shall be assessed based on the participation in NCC, NSS, Conferences (Research paper Publication (Journal/ Conference)), Organizing events, participations in events (Conf/Workshop/Training/Webinar/seminar), competitions (Inter University, State, National, International level) including Music, Debate, Sports, Hackathon and so on.	L	T	P	Cr	
1	TGP101	General proficiency-I	0	0	0	0	1
2	TGP102	General proficiency-II	0	0	0	0	1
3	TGP201	General profeciency-III	0	0	0	0	1
4	TGP202	General profiency -IV	0	0	0	0	1
5	TGP301	General profeciency-V	0	0	0	0	1
6	TGP302	General profiency -VI	0	0	0	0	1
7	TGP401	General profeciency-VII	0	0	0	0	1
8	TGP402	General profiency -VIII	0	0	0	0	1

Skill courses

Sl. No	Course Code	Skill Courses	L	T	P	Cr
1	TSE101	Solar panel Technician level -I (Foundation) (Choices are avaible in in skill basket)	2	0	1	3
2	TSE106	Solar panel Technician level – II (Advanced)	2	0	1	3
	TSE108	Engineering graphics and design	0	0	1	1
3	TSE120	Electronic Technician level -I (Foundation)	2	0	1	3
4	TSE130	Electronic Technician level -II (Advanced)	2	0	1	3
5	TSE140	Electrician level -I (Foundation)	2	0	1	3
6	TSE150	Electrician level -II (Advanced)	2	0	1	3
7	TSE160	CISCO Networking (Foundation)	2	0	1	3
8	TSE170	CISCO Networking (Advanced)	2	0	1	3

9	TSE180	Web Development & Management (Foundation)	2	0	1	3
10	TSE182	Web Development & Management (Advanced)	2	0	1	3
11	TSE183	Fortinet Network Security Expert Program (Foundation)	2	0	1	3
12	TSE184	Fortinet Network Security Expert Program (Advanced)	2	0	1	3
13	TSE185	Digital Marketing (Foundation)	2	0	1	3
14	TSE186	Digital Marketing (Advanced)	2	0	1	3
15	TSE187	Digital Embedded System (Foundation)	2	0	1	3
16	TSE188	Digital Embedded System (Advanced)	2	0	1	3
17	TSE210	Mobile Technology	2	0	1	3
18	TSE230	Software testing	2	0	1	3
19	TSE201	Multimedia Technology	2	0	1	3
20	TSE240	Free and open sourse software	2	0	1	3
21	TSE189	Branding and Marketing	3	0	0	3
22	TSE241	Pre Sales	3	0	0	3

Multi-discplinary courses

Sl. No	Course Code	Multidiscplinary Courses	L	T	P	Cr
1		Engineering Mathematics-1	2	0	1	3
2		Engineering Physics	2	0	1	3
3		Engineering Mathematics-2	2	0	1	3
4		Engineering Mathematics-3	3	0	0	3
5		Engineering Chemestry	2	0	1	3
6		Basic Biology	2	0	1	3

Ability Courses

Sl. No.	Course Code	Ability Enhancement Course	L	T	P	Cr
1		Communicative English-I	1	0	1	2
2		Arabic Language	1	0	1	2
3		French	1	0	1	2

4		German	1	0	1	2
5	TAE103	Design Thinking & Strategic Innovation (IBM)	0	0	1	1

6	TAE301	Employability planning & preparation – I	0	0	1	1
7	TAE302	Employbility planning & preparation – II	0	0	1	1
8	TAE303	Career Readiness for Digital Era (L&T)	0	0	1	1
9		Research Methodology	0	0	2	2

Value-Added courses

Sl. No	Course Code	Value-added Courses	L	T	P	Cr
1		Happiness Connect program	0	0	2	2
2	TVA101	Sustainable Development Goal	1	0	0	1
3	TVA201	Disaster management	0	0	1	1
4		Indian knowledge system	2	0	0	2
5		Green Governance	2	0	0	2
6	TVA202	Constitution of India	1	0	0	1
7	TVA301	Universal human values	1	0	0	1
8		Vedic mathematics	1	0	0	1
		Niti Shastra	1	0	0	1

Second Major

(Electronics and communication Engineering)

Sl. No.	Course Code	Courses	L	T	P	Cr
1	TEC213	Signals and Systems	3	0	1	4
2	TEC214	Analog Communication technique	3	0	1	4
3	TEC215	Digital Communication Technique	3	0	1	4
4	TEC216	Telecommunication Network and Optimization	3	0	1	4
5	TEC217	VLSI Design	3	0	1	4
6	TEC314	Mobile Communication and Networks	3	0	1	4
7	TEC315	Microwave Theory and Techniques	3	0	1	4

8	TEC316	Fiber Optic Communications	3	0	1	4
9	TEC317	Digital Audio Processing	3	0	1	4
10	TEC318	Adaptive Signal Processing	3	0	1	4
11	TEC408	Antennas and Propagation	3	0	1	4
12	TEC409	Advanced Mobile Communications	3	0	1	4
13	TEC410	Digital Image Processing	3	0	1	4
14	TEC411	Satellite Communication	3	0	1	4
15	TEC412	High Speed Electronics	3	0	1	4
16	TEC413	Nanoelectronics	3	0	1	4
		Total credit				**64**

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

Sl. No.	Course Code	Courses		L	T	P	Cr
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
		Total credit					**64**

Second Major
(Electrical Enginnering)

Sl. No.	Course Code	Courses		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
		Total credit					**64**