

## B.Tech (Electrical and Electronics Engineering) OVERALL CREDIT STRUCTURE

Undergraduate Core (UC)		Undergraduate Elective (UE)	
Category	Credit	Category	Credit
DC	59	DE	25 (Minimum)
BS	19	HM	6(Minimum)
ES	20	OC	25 (Balance)
HM	6	UN	00 (Courses)
Total	104	Total	56
Grand Total UC+UE		160	

Course Code	Course	L-T-P	Credit
Basic Sciences (BS)			
SCL102	Applied Mathematics-I	3-2-0	4
SCL103	Applied Mathematics-II	3-2-0	4
SCL201	Applied Mathematics-III**	3-0-0	3
SCL104	Applied Physics	3-0-2	4
SCL105	Applied Chemistry	3-0-2	4
Total			19

Engineering Arts and Sciences (ES)		L-T-P	Credit
CEL101	Engineering Mechanics	3-0-2	4
EEL101	Elementary Electrical Engineering	3-0-2	4
MEL101	Engineering Drawing	3-0-2	4
CSL101	Computer Programming	3-0-2	4
MEP101	Mechanical Workshop	0-0-2	1
EEL101	Electrical Workshop	0-0-2	1
CEL102	Environmental Science	2-0-0	2
Total			20

Humanities and Management (Core) (HM)		L-T-P	Credit
HMP102	Spoken English	1-0-2	2
HMP103	Written English	1-2-0	2
HML101	Social Science	2-0-0	2
Total			6

Non Credit Requirement		L-T-P	Credit
NCN101	NCC#	-	0
NCN102	NSS#	-	0
NCN103	NSO#	-	0
SPB101	Sports-1#	0-0-4	0
SPB102	Sports-II#	0-0-4	0
EED201	Project	-	0
EED301	Literature Review Paper Writing	-	0
EET201	Practical Training	-	0
HMD201	Community Project	-	0

#A student has to opt at least one from NCC, NSS, NSO and sports (I & II both).  
Note: Students are required to opt the core courses in the order (\*, \*\*, \*\*\*)

Departmental Core (DC)		L-T-P	Credit
SCL202	Electronic and Electromagnetic Materials*	3-0-0	3
EEL202	Basic Electrical Circuits*	3-0-2	4
EEL203	Electrical Machines*	3-0-2	4
EEL204	Network Theory*	3-2-0	4
EEL205	Measurement & Instrumentation**	3-0-2	4
ECL201	Electronic Circuits*	3-0-2	4
ECL202	Digital Circuits*	3-0-2	4
ECL203	Signals and Systems*	3-2-0	4
EEL301	Power System*	3-2-0	4
EEL302	Control System**	3-0-2	4
EEL303	Power Electronics***	3-0-2	4
EEL309	Electric Drives**	3-0-2	4
ECL301	Linear Integrated Circuits***	3-0-2	4
ECL305	Microcontroller & Interfacing**	3-0-2	4
EEL401	Switchgear & Protection***	3-0-2	4

Departmental Elective (DE)		L-T-P	Credit
ECL205	Electromagnetic Waves	3-2-0	4
CSL204	Introduction to Object Oriented Methodology	3-0-2	4
EEL304	Switched Mode Power Converters	3-2-0	4
EEL305	Soft Computing Techniques	3-0-2	4
EEL306	Power Quality Issues and Solutions	3-0-0	3
EEL307	Electrical and Industrial Safety	3-0-0	3
EEL308	Industrial Instrumentation	3-0-2	4
EEL310	Control System Design	3-2-0	4
EEL312	Electrical Energy System	3-0-0	3
EEL313	Electrical Distribution System	3-0-0	3
EEL314	High Voltage Engineering	3-0-0	3
EEL315	Electrical Utilization & Traction	3-0-0	3
ECL304	Digital Signal Processing	3-0-2	4
EEL402	Special Electrical Machines Design	2-0-2	3
EEL403	Optimal Control Theory	3-2-0	4
EEL404	Computer Control and Automation of Power Systems	3-0-0	3
EEL405	FACTS	3-0-0	3
EEL406	Discrete Data and Digital Control	3-2-0	4
EEL407	Power Plant Engineering	3-0-0	3
EEL409	Process Control and Instrumentation	3-0-2	4
EEL410	HVDC	3-0-0	3
EEL411	Power System Economics & Management	3-0-0	3
MEL411	Robotics	3-0-2	4
ECL405	Adaptive Signal Processing	3-2-0	4
ECL410	Image Processing	3-2-0	4
ECL412	VLSI Technology	3-0-2	4
ECL415	Biomedical Instrumentation	3-0-0	3
SCL402	Linear Algebra	3-0-0	3
SCL403	Probability Theory & Statistics	3-0-0	3
EED401	Major Project Part-I	-	1
EED402	Major Project Part-II	-	3

## M. Tech. (Electrical Engineering) specialization in Power System & Control.

### OVERALL CREDIT STRUCTURE

S. No	Category	Symbol	M. Tech (2-Year) (Credits)
<b>1</b>	<b>PG Core</b>	<b>PC</b>	<b>30</b>
1.1	Departmental Core	DC	13
1.2	Project phase-I	P1	05
1.3	Project phase-II	P2	10
1.4	Seminar	SM	02
<b>2</b>	<b>PG Elective</b>	<b>PE</b>	<b>25</b>
2.1	Specialization Electives	SE	19
2.2	Open Courses	OC	06
<b>TOTAL REQUIREMENT</b>			<b>55</b> <b>(Minimum)</b>

Postgraduate Core (PC)		L-T-P	Credit
EED501	Project Phase –I	-	05
EED502	Project Phase-II	-	10
EED503	Seminar	-	02
EEL412	Advanced Control Theory	3-0-0	03
EEL417	Power Electronic Circuit Design and Analysis	3-0-0	03
EEL420	Power System Dynamics & Stability	3-0-0	03
EEL426	Computational Techniques in Engineering	3-0-0	03
EEL401	Advanced Power and Drives Lab	0-0-2	1
Specialization Elective (SE)		L-T-P	Credit
EEL403	Optimal Control Theory	3-2-0	04
EEL405	FACTS	3-0-0	03
EEL406	Discrete Data & Digital Control	3-2-0	04
EEL410	HVDC	3-0-0	03
EEL411	Power System Economics Management	3-0-0	03
EEL413	Computer Aided Power System Analysis	3-0-0	03
EEL414	Wind Energy	3-0-0	03
EEL418	Digital Protection & Power System	3-0-2	04
EEL419	Process Dynamics and Non Linear Control	3-0-0	03
EEL421	EHVAC Transmission	3-0-0	03
EEL422	System Engineering	3-0-0	03
EEL424	Grid Connected Solar System	3-0-0	03
EEL427	Intelligence Techniques Application To Power System	3-0-0	03
EEL428	Distribution System Modeling And Analysis	3-0-0	03
EEL429	Power System Planning	3-0-0	03
EEL432	Smart Grid Technology	3-0-0	03
EEL402	Power System Lab	0-0-2	01

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2.1	Specialization Electives	SE	19
2.2	Open Courses	OC	06
<b>TOTAL REQUIREMENT</b>			<b>55</b> <b>(Minimum)</b>

Postgraduate Core (PC)		L-T-P	Credit
EED501	Project Phase –I	-	05
EED502	Project Phase-II	-	10
EED503	Seminar	-	02
EEL412	Advanced Control Theory	3-0-0	03
EEL417	Power Electronic Circuit Design and Analysis	3-0-0	03
EEL420	Power System Dynamics & Stability	3-0-0	03
EEL426	Computational Techniques in Engineering	3-0-0	03
EEL401	Advanced Power and Drives Lab	0-0-2	01
Specialization Elective (SE)		L-T-P	Credit
EEL402	Special Electrical Machine Design	2-0-2	03
EEL403	Optimal Control Theory	3-2-0	04
EEL405	FACTS	3-0-0	03
EEL406	Discrete Data & Digital Control	3-2-0	04
EEL410	HVDC	3-0-0	03
EEL414	Wind Energy	3-0-0	03
EEL415	Power Quality Mitigation Techniques	3-0-0	03
EEL416	Advance AC Electric Drives	3-0-0	03
EEL419	Process Dynamics & Non Linear Control	3-0-0	03
EEL422	System Engineering	3-0-0	03
EEL423	Modeling and Analysis of Electrical Machines	3-0-0	03
EEL425	Computer Aided Design of Electrical Machine	2-0-2	03
EEL430	Industrial Automation And Control	3-0-0	03
EEL431	Advanced Electric Machines	3-0-0	03
EEL433	Switch Mode Power Converter and Its Applications	3-2-0	03
EEL402	Power Electronics and Drives Lab	0-0-2	01