



### SEMESTER I

No	Title	Credit	Cat
CS1100	Computational Engineering	3	BET
CY1001	Chemistry: Structure, Bonding & Reactivity	4	SCY
EC1000	Introduction to Electrical Engineering	2	BET
GN1100	Life Skills	2	HPF
ID1100	Concepts in Engineering Design	2	BET
MA1010	Calculus I Functions of One Variable	4	SMA
PH1010	Physics I	3	SPH
PH1030	Physics Laboratory I	2	SPH
	<b>TOTAL</b>	<b>22</b>	

Remarks

### SEMESTER II

No	Title	Credit	Cat
CY1002	Chemistry Lab I	3	SCY
EC1010	Electrical and Magnetic Circuits	4	PMT
MA1020	Calculus II Functions of Several Variables	4	SMA
ME1100	Thermodynamics	3	BET
ME1120	Engineering Drawing	3	BES
PH1020	Physics II	3	SPH
PH1040	Physics Laboratory II	2	SPH
	<b>TOTAL</b>	<b>22</b>	

### SEMESTER III

No	Title	Credit	Cat
AM1100	Engineering Mechanics	4	BET
BT1010	Life Sciences	2	SLS
EE2001	Digital Systems	4	PMT
EE2002	Networks and Systems	4	PMT
EE2701	CAD Laboratory	2	PML
ID1200	Ecology and Environment	2	BET
HSE1	Humanities Elective 1	3	HSS
MAE1	Mathematics Elective 1	3	SMA
	<b>TOTAL</b>	<b>24</b>	



### SEMESTER IV

No	Title	Credit	Cat
EE2003	Computer Organization	4	PMT
EE2004	Digital Signal Processing	4	PMT
EE2005	Electrical Machines	4	PMT
EE2006	Electromagnetic Fields	4	PMT
EE2702	Digital Circuits Laboratory	2	PML
HSE2	Humanities Elective 2	3	HSS
MAE2	Mathematics Elective 2	3	SMA
	<b>TOTAL</b>	<b>24</b>	

### SEMESTER V

No	Title	Credit	Cat
EE3001	Solid State Devices	4	PMT
EE3002	Analog Circuits	4	PMT
EE3003	Power Systems	4	PMT
EE3004	Control Engineering	4	PMT
EE3701	Microprocessor Laboratory	2	PML
EE3702	Electrical Machines Laboratory	2	PML
MNS1	Minor Elective 1	3	MNS
	<b>TOTAL</b>	<b>23</b>	

### SEMESTER VI

No	Title	Credit	Cat
EE3005	Communication Systems	4	PMT
EE3006	Principles of Measurement	4	PMT
EE3020	Industrial Training	2	PIT
EE3703	Analog Circuits Laboratory	2	PML
DPE1	Department Elective 1	3	PMT
DPE2	Department Elective 2	3	PMT
DPE3	Department Elective 3	3	PMT
MNS2	Minor Elective 2	3	MNS
	<b>TOTAL</b>	<b>24</b>	

### SEMESTER VII

No	Title	Credit	Cat
EE4701	Advanced EE Laboratory	2	PML
EE4900	B.Tech Project	9	PMP
IL4103	Industrial Lecture	1	PIL
DPE4	Department Elective 4	3	PMT
DPE5	Department Elective 5	3	PMT
DPE6	Department Elective 6	3	PMT
FRE1	Free Elective 1	3	
FRE2	Free Elective 2	3	
HSP3	Humanities Elective [Pass/Fail] 3	2	HPF
MNS3	Minor Elective 3	3	MNS
	<b>TOTAL</b>	<b>32</b>	



### SEMESTER VIII

No	Title	Credit	Cat
EC4201	Project II	8	PMP
FRE3	Free Electrive 3	3	
HSE4	Humanities Elective 4	3	HSS
	TOTAL	14	



**Electives**

No.	Course Title	Credit
EC1040	Digital Systems	4
EC2010	Analog Circuits I	4
EC2102	Networks and Systems	4
EC312N	Microprocessor Lab	1
EC5410	Fibre Optic Communication Technology	4
EE3040	Power Electronics	4
EE3110	Probability Foundations for Electrical Engineers	4
EE3203	Power Electronics	4
EE3301	Introduction to Semiconductor Devices	3
EE3313	Device Modelling	4
EE4131	Analog and Digital Filters	3
EE4371	Introduction to Data Structures and Algorithms	3
EE4504	Fibre Optic Communication	3
EE4706	Advanced Power Systems Lab I	3
EE4801	Honours Self-Study Elective I	3
EE4902	Mini Project	3
EE5000	Laboratory I	2
EE5002	Analysis of Networks & Systems	4
EE5011	Computer Methods in Electrical Engineering	4
EE5050	Microwave Circuit Theory	3
EE5110	Probability Foundations for Electrical Engineers	4
EE5111	Estimation Theory	4
EE5113	Detection and Estimation Theory	4
EE5120	Applied Linear Algebra I for EE	4
EE5121	Optimization Methods in Signal Processing and Communications	4
EE5131	Selected Topics in Digital Signal Processing	3
EE5133	VLSI Technology	4
EE5134	Digital IC Design	4
EE5140	Digital Modulation and Coding	4
EE5141	Introduction to Wireless and Cellular Communication	4
EE5142	Introduction to Information Theory and Coding	4
EE5150	Communication Networks	4
EE5151	Communication Techniques	4
EE5154	Complex Network Analysis	12
EE5160	Error Control Coding	4
EE5161	Modern Coding Theory	4
EE5162	Information Theory	3
EE5170	Speech Signal Processing	4
EE5175	Image Signal Processing	4
EE5176	Computational Photography	4
EE5201	Modelling and Analysis of Electric Machines	3
EE5202	Computer Aided Design of Electrical Machines	4
EE5210	Semiconductor Device Modelling	4
EE5212	Digital Controller for power Applications	4
EE5255	High Voltage Power Transmission	4



**Electives**

EE5257	Energy Management Systems and SCADA	3
EE5258	Power System Optimization	3
EE5260	Power Quality	3
EE5261	Flexible AC Transmission Systems	3
EE5290	High Speed ICs	3
EE5323	Advanced Electrical Networks	4
EE5330	Computer-Aided Design and Analysis of Digital ICs	4
EE5331	DSP Architectures & Embedded Systems	4
EE5332	Mapping Signal Processing Algorithms to DSP Architectures	4
EE5340	MicroElectroMechanical Systems	3
EE5341	MOS Device Modeling & Characterization	3
EE5342	Compound Semiconductors – Properties & Applications	3
EE5343	Solar Cell Device Physics and Materials Technology	3
EE5346	Introduction to Plastic Electronics	3
EE5350	Mathematical Methods for Circuit Analysis	3
EE5560	Laboratory (Power & Control)	2
EE5580	Project	20
EE5580*	Project	10
EE6010	Smart Power Grids	3
EE6030	Seminar - VLSI Stream	1
EE6070	Seminar	1
EE6110	Adaptive Signal Processing	4
EE6112	Topics in Random Processes and Concentrations	3
EE6130	Advanced Topics in Signal Processing	3
EE6131	Digital Filter Design	4
EE6132	Advanced Topics in Signal Processing	9
EE6141	Multicarrier Communications	4
EE6142	Advanced Topics in Communications	3
EE6150	Stochastic Modeling and the Theory of Queues	4
EE6151	Advanced Topics in Networks	3
EE6200	Power Electronic Control of Electric Machines	4
EE6254	Advanced Topics in Electrical Insulation	3
EE6258	DC Power Transmission Systems	3
EE6261	RESTRUCTURED POWER SYSTEMS	3
EE6320	RF Integrated Circuits	3
EE6321	VLSI Data Conversion Circuits	4
EE6322	VLSI Broadband Communication Circuits	4
EE6323	Wireless System Design	4
EE6343	Special Electronic Devices	4
EE6346	Advanced CMOS Devices and Technology	3
EE6361	Advanced Topics in VLSI	3
EE6402	Biomedical Electronic Systems	3
EE6403	Transducers for Instrumentation	3
EE6404	Power System Instrumentation	3
EE6412	Adaptive & Optimal Control	3



**Electives**

EE6415	Nonlinear Control Systems	3
EE6417	Allied Topics in Control Systems	3
EE6419	Geometric Nonlinear Control Theory	3
EE6470	Optical Signal Processing	3
EE6491	Advanced Topics in Instrumentation	3
EE6500	Integrated Optoelectronic Devices and Circuits	4
EE6501	Optical Sensors	4
EE6502	Optical Signal Processing and Quantum Communication	3
EE6505	Waveguides, Microwave Circuits, and Antennas	4
EE6506	Computational Electromagnetics	4
EE6700	Advanced Photonics Laboratory	3
EE6999	Special Topics in Electrical Engineering	3
EE7001	Directed Study on Research Topics	4
EE7030	Advanced Topics in VLSI	3
EE7401	Directed Study on Research Topics	4
EE7500	Advanced Topics in RF and Photonics	4
EE7999	Special Topics in Electrical Engineering	3
EL5223	Laboratory (Power)	2
EP3200	Photonics	3
ID3010	Sensory, Motor and Language Disorders	3
ID3020	Design of Assistive Devices	3
ID4100	Creative Engineering Project	3
NC1020	NCC	0
NS1020	NSO	0
NS1030	NSS	0
PH5650	Laser Theory	3
PH5840	Quantum Computation and Quantum Information	3



**Electives**

No.	Course Title	Credit
EC1040	Digital Systems	4
EC2010	Analog Circuits I	4
EC2102	Networks and Systems	4
EC312N	Microprocessor Lab	1
EC5410	Fibre Optic Communication Technology	4
EE3040	Power Electronics	4
EE3110	Probability Foundations for Electrical Engineers	4
EE3203	Power Electronics	4
EE3301	Introduction to Semiconductor Devices	3
EE3313	Device Modelling	4
EE4131	Analog and Digital Filters	3
EE4371	Introduction to Data Structures and Algorithms	3
EE4504	Fibre Optic Communication	3
EE4706	Advanced Power Systems Lab I	3
EE4801	Honours Self-Study Elective I	3
EE4902	Mini Project	3
EE5000	Laboratory I	2
EE5002	Analysis of Networks & Systems	4
EE5011	Computer Methods in Electrical Engineering	4
EE5050	Microwave Circuit Theory	3
EE5110	Probability Foundations for Electrical Engineers	4
EE5111	Estimation Theory	4
EE5113	Detection and Estimation Theory	4
EE5120	Applied Linear Algebra I for EE	4
EE5121	Optimization Methods in Signal Processing and Communications	4
EE5131	Selected Topics in Digital Signal Processing	3
EE5133	VLSI Technology	4
EE5134	Digital IC Design	4
EE5140	Digital Modulation and Coding	4
EE5141	Introduction to Wireless and Cellular Communication	4
EE5142	Introduction to Information Theory and Coding	4
EE5150	Communication Networks	4
EE5151	Communication Techniques	4
EE5154	Complex Network Analysis	12
EE5160	Error Control Coding	4
EE5161	Modern Coding Theory	4
EE5162	Information Theory	3
EE5170	Speech Signal Processing	4
EE5175	Image Signal Processing	4
EE5176	Computational Photography	4
EE5201	Modelling and Analysis of Electric Machines	3
EE5202	Computer Aided Design of Electrical Machines	4
EE5210	Semiconductor Device Modelling	4
EE5212	Digital Controller for power Applications	4
EE5255	High Voltage Power Transmission	4



### Electives

EE5257	Energy Management Systems and SCADA	3
EE5258	Power System Optimization	3
EE5260	Power Quality	3
EE5261	Flexible AC Transmission Systems	3
EE5290	High Speed ICs	3
EE5323	Advanced Electrical Networks	4
EE5330	Computer-Aided Design and Analysis of Digital ICs	4
EE5331	DSP Architectures & Embedded Systems	4
EE5332	Mapping Signal Processing Algorithms to DSP Architectures	4
EE5340	MicroElectroMechanical Systems	3
EE5341	MOS Device Modeling & Characterization	3
EE5342	Compound Semiconductors – Properties & Applications	3
EE5343	Solar Cell Device Physics and Materials Technology	3
EE5346	Introduction to Plastic Electronics	3
EE5350	Mathematical Methods for Circuit Analysis	3
EE5560	Laboratory (Power & Control)	2
EE5580	Project	20
EE5580*	Project	10
EE6010	Smart Power Grids	3
EE6030	Seminar - VLSI Stream	1
EE6070	Seminar	1
EE6110	Adaptive Signal Processing	4
EE6112	Topics in Random Processes and Concentrations	3
EE6130	Advanced Topics in Signal Processing	3
EE6131	Digital Filter Design	4
EE6132	Advanced Topics in Signal Processing	9
EE6141	Multicarrier Communications	4
EE6142	Advanced Topics in Communications	3
EE6150	Stochastic Modeling and the Theory of Queues	4
EE6151	Advanced Topics in Networks	3
EE6200	Power Electronic Control of Electric Machines	4
EE6254	Advanced Topics in Electrical Insulation	3
EE6258	DC Power Transmission Systems	3
EE6261	RESTRUCTURED POWER SYSTEMS	3
EE6320	RF Integrated Circuits	3
EE6321	VLSI Data Conversion Circuits	4
EE6322	VLSI Broadband Communication Circuits	4
EE6323	Wireless System Design	4
EE6343	Special Electronic Devices	4
EE6346	Advanced CMOS Devices and Technology	3
EE6361	Advanced Topics in VLSI	3
EE6402	Biomedical Electronic Systems	3
EE6403	Transducers for Instrumentation	3
EE6404	Power System Instrumentation	3
EE6412	Adaptive & Optimal Control	3





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EE6470	Optical Signal Processing	3
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EE6500	Integrated Optoelectronic Devices and Circuits	4
EE6501	Optical Sensors	4
EE6502	Optical Signal Processing and Quantum Communication	3
EE6505	Waveguides, Microwave Circuits, and Antennas	4
EE6506	Computational Electromagnetics	4
EE6700	Advanced Photonics Laboratory	3
EE6999	Special Topics in Electrical Engineering	3
EE7001	Directed Study on Research Topics	4
EE7030	Advanced Topics in VLSI	3
EE7401	Directed Study on Research Topics	4
EE7500	Advanced Topics in RF and Photonics	4
EE7999	Special Topics in Electrical Engineering	3
EL5223	Laboratory (Power)	2
EP3200	Photonics	3
ID3010	Sensory, Motor and Language Disorders	3
ID3020	Design of Assistive Devices	3
ID4100	Creative Engineering Project	3
NC1020	NCC	0
NS1020	NSO	0
NS1030	NSS	0
PH5650	Laser Theory	3
PH5840	Quantum Computation and Quantum Information	3



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EE3040	Power Electronics	4
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EE5141	Introduction to Wireless and Cellular Communication	4
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EE5323	Advanced Electrical Networks	4
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NS1020	NSO	0
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PH5840	Quantum Computation and Quantum Information	3