

COLLEGE OF ENGINEERING AND ARCHITECTURE Department of Electrical and Computer Engineering

Bachelor of Electrical Engineering

Study Plan and Degree Plan 2023-2024



	BSc in Electrical Engineering												
Study Plan 2023 2024													
C – Credit Hours, L – Credit Lecture, P – Credit Practical													
			CODI	E			(COURSE	C L P				
Y E		Summ	ner Semester	MATH116/L		P	Pre- Ca	lculus		4 3 2			
			ARAB100	ARAB100 Arabic			Language I		3 3 0				
	_	CODE	COUDS		C		D		CODE		C	т	р
A		PHYS101/I	General Physics I	E	<u>C</u>	L 3	P 2		CODE MATH212/I	COURSE Calculus II	<u>C</u> 3	L 3	P 0
R 1		MATH 211/	Calculus I		4	3	2		ENGN103	Engineering Drawing	2	1	2
	F	ENGL150	English Language I		3	3	$\frac{3}{3}$ 0 SPRING		PHYS150/L	General Physics II	4	3	2
	A	COMP101/L	Computer Skill		3	2	$\frac{3}{2}$ 2	ELEC212	Circuit Analysis I	3	3	0	
	L	ENGN101	Introduction to Eng	ineering	2	2	0	-	ENGL152	English Language II	3	3	0
					16	13	6				15	13	4
				CODI	E			(COURSE	C L P			
		G		ARAB101 Ara		Arabic	Language II	11	3 3 0				
		Summer Semester		ENGL155 Communication Sk				inication Ski	11				
		CODE	COUDS	P	C	T	р		CODE		C	т	D
		MATH312/	Differential Equation	t s for	3	<u>L</u> 3	P		MATH325/L	Linear & Multi Variant Calculus	3	L 3	r
		L	Engineers	5 101	5	5	Ŭ		NH 1111525/ E		5	5	0
Y		ELEC213	Circuit Analysis II		3	3	0	CODDING	COMP151/L	Introduction to Algorithm &	4	3	2
E	F							SPRING		Programming			
R	L	ELEC221	Electronics I		3	3	0		ELEC312	Electromagnetic Theory		3	0
	L	ELEC241	Digital Logic Design		3	3	0		ELEC321	Electronics II	3	3	0
2		HIST150	Islamic Civilization	L	3	3	0		ELEC331	Signals & Systems	3	3	0
		ELEC291	Electrical Circuits La	0	1	15	2		ELEC292	Analog Electronics Lab	1	15	2
				COD	10	15	2		COUDSE		17	15	4
		Sum	non Comoston	MNGT100/I		E	Intrepr	eneurship Cr	eativity And In	$\frac{\mathbf{C}}{\mathbf{L}} \mathbf{F}$			
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		CODE	COURS	E	С	L	Р		CODE	6 6 0 COURSE	С	L	Р
		CODE ELEC410	COURSI Electrical Machines	E	C 3	L 3	P 0		CODE ELEC432	6 6 0 COURSE Digital Signal Processing	C 3	L 3	P 0
		CODE ELEC410 ELEC322	COURSI Electrical Machines Digital Electronics	£	C 3 3	L 3 3	P 0		CODE ELEC432 ELEC431	6 6 0 COURSE Digital Signal Processing Communication Systems	C 3 3	L 3 3	P 0
		CODE ELEC410 ELEC322 ELEC311	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation	£	C 3 3 3	L 3 3 3	P 0 0		CODE ELEC432 ELEC431 ELEC490	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis	C 3 3 3	L 3 3 3	P 0 0 0
Y E	F	CODE ELEC410 ELEC322 ELEC311 ELEC341	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers	E	C 3 3 3 3	L 3 3 3	P 0 0 0 0 0	SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC414	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Power Electronics	C 3 3 3 3	L 3 3 3 3	P 0 0 0 0 0
Y E A	FA	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems	E	C 3 3 3 3 3	L 3 3 3 3	P 0 0 0 0 0 0 0 0 0	SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC414 ELEC491	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Power Electronics Control Lab	C 3 3 3 3 1	L 3 3 3 3 0	P 0 0 0 0 2
Y E A R	F A L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design	E Lab	C 3 3 3 3 3 1	L 3 3 3 3 3 0	P 0 0 0 0 0 0 0 0 2	SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC414 ELEC491 ELEC382	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab	C 3 3 3 3 1 1	L 3 3 3 3 0 0	P 0 0 0 0 0 2 2
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design	E	C 3 3 3 3 3 1	L 3 3 3 3 3 0	P 0 0 0 0 0 0 2	SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC414 ELEC491 ELEC382 ELEC393	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab	C 3 3 3 3 1 1 1	L 3 3 3 3 0 0 0 0	P 0 0 0 2 2 2 2
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design	E	C 3 3 3 3 1 16	L 3 3 3 3 0 15	P 0 0 0 0 0 0 2 2 2	SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC414 ELEC491 ELEC382 ELEC393	6 6 COURSE Digital Signal Processing Communication Systems Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab	C 3 3 3 3 1 1 1 1 5	L 3 3 3 0 0 0 0 12	P 0 0 0 2 2 2 6
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design	E Lab COD	C 3 3 3 3 1 16 E	L 3 3 3 3 0 15	P 0 0 0 0 0 0 2 2 2	SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC414 ELEC491 ELEC382 ELEC393 COURSE	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab Colspan="2">Control Lab	C 3 3 3 3 1 1 1 1 5	L 3 3 3 0 0 0 12	P 0 0 0 0 2 2 2 6
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design	E Lab COD ENGN333	C 3 3 3 3 1 1 16 E	L 3 3 3 3 3 0 15	P 0 0 0 0 0 0 2 2 2	SPRING (al training	CODE ELEC432 ELEC431 ELEC490 ELEC490 ELEC491 ELEC382 ELEC393 COURSE	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab Colspan="2">C L P 2 0 2	C 3 3 3 1 1 1 1 5	L 3 3 3 0 0 0 0 12	P 0 0 0 2 2 2 6
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design	E Lab ENGN333	C 3 3 3 3 3 1 1 16 E	L 3 3 3 3 0 15	P 0 0 0 0 0 0 2 2 2	SPRING al training	CODE ELEC432 ELEC431 ELEC490 ELEC414 ELEC491 ELEC382 ELEC393 COURSE	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Complex analysis Complex analysis Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab Colspan="2">L P 2 0 2 0	C 3 3 3 1 1 1 15	L 3 3 3 0 0 0 0 12	P 0 0 0 2 2 6
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design	E Lab CODI ENGN333	C 3 3 3 3 3 1 16 E	L 3 3 3 3 3 0 15	P 0 0 0 0 0 0 2 ndustri 2	SPRING al training	CODE ELEC432 ELEC431 ELEC490 ELEC490 ELEC491 ELEC382 ELEC393 COURSE	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab C L P 2 0 2 2 0 2	C 3 3 3 1 1 1 15	L 3 3 3 0 0 0 0 12	P 0 0 0 0 2 2 2 6 6
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281 Summ	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design ner Semester	E Lab COD ENGN333	C 3 3 3 3 3 1 16 E	L 3 3 3 3 3 0 15 L L	P 0 0 0 0 0 2 2 2 2	SPRING (al training	CODE ELEC432 ELEC431 ELEC490 ELEC491 ELEC393 ELEC393 COURSE	6 6 COURSE Digital Signal Processing Communication Systems Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab C L P 2 0 2 2 0 2 COURSE	C 3 3 3 1 1 1 1 5 C	L 3 3 3 0 0 0 0 12	P 0 0 2 2 2 6 6
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC412 ELEC281 Summ CODE ELEC512 ELEC512 ELEC5**	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microcontrollers Control Systems Digital Logic Design ner Semester COURSI Electric Drives Electric Drives	E Lab CODI ENGN333	C 3 3 3 1 16 E C 3 3	L 3 3 3 3 0 15 L 3 3	P 0 0 0 0 0 0 2 2 2 P 0 0 0	SPRING al training	CODE ELEC432 ELEC431 ELEC431 ELEC490 ELEC491 ELEC382 ELEC393 CODE ELEC5** ELEC5**	6 6 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Complex analysis Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab C L P 2 0 2 2 0 2 2 0 2 COURSE	C 3 3 3 1 1 1 1 5 C 3 3	L 3 3 3 0 0 0 0 12 L 3 3	P 0 0 0 0 2 2 2 6 0
Y E A R 3	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC412 ELEC281 Summ CODE ELEC512 ELEC5** ELEC5**	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design Digital Logic Design ner Semester Electric Drives Elective – I Elective – I	E Lab COD ENGN333 E	C 3 3 3 3 1 1 16 E C 3 3 3 3 3	L 3 3 3 3 0 15 L 3 3 3 3	P 0 0 0 0 0 0 2 2 2 Industri 0 0 0 0 0	SPRING al training SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC490 ELEC491 ELEC382 ELEC393 CODE ELEC5** ELEC5** ELEC5**	6 6 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab COURSE Elective - III Elective - IV Elective - V	C 3 3 3 1 1 1 1 5 C 3 3 3 3 3	L 3 3 3 0 0 0 0 0 12 L 3 3 3 3	P 0 0 0 2 2 2 2 6 P 0 0 0
Y E A R 3 Y E	F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281 Summ CODE ELEC512 ELEC5** ELEC5** ELEC5** ELEC511	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design Digital Logic Design Electric Drives Electric Drives Elective – I Elective - II Power Systems Analy	E Lab COD ENGN333 E	C 3 3 3 3 1 1 6 E C 3 3 3 3 3 3 3	L 3 3 3 3 3 0 15 L 3 3 3 3 3 3	P 0	SPRING al training SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC490 ELEC491 ELEC382 ELEC393 COURSE CODE ELEC5** ELEC5*	6 6 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Complex analysis Complex analysis Complex analysis Complex analysis Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab COURSE Elective - IL COURSE Elective - III Elective - V Lab Elective	C 3 3 3 1 1 1 1 5 C 3 3 3 1	L 3 3 3 0 0 0 0 0 12 L 3 3 3 0	P 0 0 0 2 2 2 6 P 0 0 0
Y E A R 3 Y E A P	FALL FALL	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281 Summ CODE ELEC512 ELEC5** ELEC511 ELEC511 ELEC570	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design ner Semester COURSI Electric Drives Elective – I Elective – II Power Systems Analy Graduation Project	E Lab COD ENGN333 E	C 3 3 3 3 3 1 1 6	L 3 3 3 3 3 0 15 15 15 10 10 11 3 3 3 3 0	P 0 0 0 0 0 0 2 2 2 ndustri 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SPRING al training	CODE ELEC432 ELEC431 ELEC490 ELEC491 ELEC382 ELEC393 COURSE ELEC5**	6 6 COURSE Digital Signal Processing Communication Systems Complex analysis Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab COURSE Elective - IL COURSE Elective - III Elective - V Lab Elective Elective - V Lab Elective	C 3 3 3 1 1 1 1 5 C 3 3 3 1 1	L 3 3 0 0 0 0 0 12 L 3 3 3 0 0 0	P 0 0 0 0 2 2 2 6 P 0 0 0 2 2 6 P 0 0 2 2 2 3
YEAR 3 YEAR 4	FALL FALL	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281 Summ CODE ELEC512 ELEC5** ELEC511 ELEC570	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design Digital Logic Design Mer Semester COURSI Electric Drives Elective – I Elective – I Elective - II Power Systems Analy Graduation Project	E Lab ENGN333 E E	C 3 3 3 3 3 1 16 E C 3 3 3 3 6 6	L 3 3 3 3 3 0 15 15 15 15 10 10 11 3 3 3 3 0	P 0 0 0 0 0 0 2 2 2 ndustri P 0 0 0 0 0 6	SPRING al training	CODE ELEC432 ELEC431 ELEC490 ELEC491 ELEC382 ELEC393 COURSE ELEC5** ELEC5** ELEC5** ELEC5** ELEC5** ELEC5** ELEC5** ELEC5** ELEC492	6 6 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab Colspan="2">Course Q Q 2 0 2 Elective - III Elective - IV Elective - IV Lab Elective Electrical Machines and Power Electronics Lab	C 3 3 3 1 1 1 1 5 C 3 3 3 1 1	L 3 3 0 0 0 0 0 12 L 3 3 3 0 0 0	P 0 0 0 2 2 2 6 P 0 0 0 2 2 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
YEAR 3 YEAR 4	F A L L F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281 Summ CODE ELEC512 ELEC5** ELEC511 ELEC570	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design Digital Logic Design Mer Semester Electric Drives Electric Drives Elective – I Elective – I Elective – II Power Systems Analy Graduation Project	E Lab ENGN333 E E Sis	C 3 3 3 3 1 16 E C 3 3 3 3 6 18	L 3 3 3 3 3 0 15 L 3 3 3 3 0 12	P 0 0 0 0 0 0 2 2 2 ndustri 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 6	SPRING al training SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC490 ELEC490 ELEC490 ELEC490 ELEC490 ELEC490 ELEC490 ELEC382 ELEC393 COURSE ELEC5** ELEC5** ELEC5** ELEC5** ELEC5* ELEC5* ELEC492	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Complex analysis Complex analysis Complex analysis Complex analysis Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab COURSE Elective - III Elective - III Elective - IV Elective - V Lab Elective Electrical Machines and Power Electronics Lab	C 3 3 3 1 1 1 1 5 C 3 3 3 1 1 1 1	L 3 3 3 0 0 0 0 0 12 12 12 12 9	P 0 0 0 2 2 2 6
YEAR 3 YEAR 4	F A L L F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281 Summ CODE ELEC512 ELEC5** ELEC5** ELEC511 ELEC570	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design Digital Logic Design ner Semester Electric Drives Electric Drives Elective – I Elective – I Elective – I Elective – I Power Systems Analy Graduation Project	E Lab ENGN333 E Sis	C 3 3 3 3 3 1 16 E E C 3 3 3 3 3 6 6 18 E	L 3 3 3 3 3 0 15 L 3 3 3 3 0 12	P 0 6	SPRING al training SPRING	CODE ELEC432 ELEC431 ELEC490 ELEC490 ELEC491 ELEC382 ELEC393 COURSE ELEC5** ELEC5** ELEC5** ELEC5** ELEC5** ELEC5** ELEC492	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Complex analysis Complex analysis Complex analysis Complex analysis Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab COURSE Elective - III Elective - IV Elective - IV Elective - V Lab Elective Electrical Machines and Power Electronics Lab	C 3 3 3 1 1 1 1 1 5 C 3 3 3 1 1 1 1 1	L 3 3 0 0 0 0 0 0 12 2 12 3 3 3 0 0 0 9	P 0 0 0 2 2 2 6
YEAR 3 YEAR 4	F A L L F A L L	CODE ELEC410 ELEC322 ELEC311 ELEC341 ELEC412 ELEC281 Summ CODE ELEC512 ELEC5** ELEC5** ELEC5** ELEC511 ELEC570 Summ	COURSI Electrical Machines Digital Electronics Measurements and Instrumentation Microprocessors and Microcontrollers Control Systems Digital Logic Design ner Semester Electric Drives Electric Pives Elective – I Elective – I Power Systems Analy Graduation Project mer Semester	E Lab CODI ENGN333 E (sis	C 3 3 3 3 1 1 16 E E C 3 3 3 3 6 6 18 E	L 3 3 3 3 3 3 0 15 L 3 3 3 3 0 12 C	P 0 0 0 0 0 0 2 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 6 6	SPRING al training SPRING Elective	CODE ELEC432 ELEC431 ELEC490 ELEC490 ELEC491 ELEC382 ELEC393 COURSE ELEC5** ELEC5** ELEC59* ELEC492 COURSE	6 6 0 COURSE Digital Signal Processing Communication Systems Complex analysis Complex analysis Power Electronics Control Lab Microprocessor and Microcontroller Lab Measurement and Instrumentation Lab Colspan="2">Control Lab Measurement and Instrumentation Lab Colspan="2">Course 2 0 2 0 2 2 0 2 COURSE Elective - IN Elective - IV Elective - V Lab Elective Electrical Machines and Power Electronics Lab COURSE	C 3 3 3 1 1 1 1 1 5 C 3 3 3 1 1 1 1 1	L 3 3 0 0 0 0 0 12 2 3 3 3 0 0 0 9	P 0 0 0 2 2 2 6 P 0 0 0 2 2 2 2 2 2 2 2 2 2 2 4

Total No. of Credit

148



	Degree Plan for	BSc in]	Electrical E	ngineering	2024				
Minimum No. of Credits for the Degree Plan = 148 Credits									
University requirements = 21 Credits									
Course Code	Course Name	Credit	Conta	ct Hours	Pre-requisites/Co-requisites				
AD AD 100		2	Theory	Practical					
ARAB100	Arabic Language-I	3	3	0	-				
ARABIOI	Arabic Language-II	3	3	0	ARABIOO				
COMP101/L Computer Skill 3 3 0 Comp-A, Comp-									
ENGL150	English Language-I	3	3	0	-				
ENGL152	English Language-II	3	3	0	ENGL150				
ENGL155	Communication Skill	3	3	0	ENGL152				
HIST150	Islamic Civilization	3	3	0	-				
	Universi	ty elective =	= 3 Credits (MNG'	Г100/L)					
College requirements = 18 Credits									
COMP151/L	Introduction to Algorithm & Programming	4	3	2	COMP101/L				
ENGN101	Introduction to Engineering	2	2	0	MATH116/L				
ENGN103	Engineering Drawings	2	1	2	-				
ENGN333	Industrial Training	2	0	4	110 credits				
MATH116	Pre-Calculus	4	4	0	-				
MATH211	Calculus-I	4	3	2	MATH116/L				
College elective = 3 Credits (ENGN201)									
		,							
	Department	Requireme	ent: Core Course=	87 Credits					
PHYS101/L	General Physics I	4	3	2	MATH116/I				
PHYS150/L	General Physics I	4	3	2	PHYS101/L				
MATH212/I	Calculus II	3	3	0	MATH211/I				
MATH212/L MATH212/I	Differential Equations for	2	2	0	MATH212/I				
MATH512/L	Engineers	3	5	0	MATH212/L				
MATH325/L	Linear & Multi Variant Calculus	3	3	0	MATH312/L				
STAT105/L	Statistics for Engineers	3	3	0	MATH211/L				
ELEC212	Circuit Analysis I	3	3	0	PHYS101/L - Co PHY150/L				
ELEC213	Circuit Analysis II	3	3	0	ELEC212 & Co – MATH312/L				
ELEC221	Electronics I	3	3	0	ELEC212				
ELEC241	Digital Logic Design	3	3	0	ELEC212				
ELEC291	Electrical Circuits Lab	1*	0	2	ELEC212				
ELEC281	Digital Logic Design Lab	1*	0	2	ELEC241				
ELEC292	Analog Electronics Lab	1*	0	2	ELEC221				
ELEC331	Signals & Systems	3	3	0	ELEC213				
ELEC321	Electronics II	3	3	0	ELEC221				
ELEC312	Electromagnetic Theory	3	3	0	ELEC213. Co-MATH312/L				
ELEC311	Measurements and Instrumentation	3	3	0	ELEC221				
ELEC341	Microprocessors & Microcontrollers	3	3	0	ELEC241				
ELEC393	Measurement and Instrumentation Lab	1*	0	2	ELEC311				



ELEC382	Microprocessor and Microcontroller Lab	1*	0	2	ELEC341
ELEC322	Digital Electronics	3	3	0	ELEC221
ELEC431	Communication Systems	3	3	0	ELEC331
ELEC414	Power Electronics	3	3	0	ELEC321
ELEC491	Control Lab	1*	0	1	ELEC412
ELEC432	Digital Signal Processing	3	3	0	ELEC331
ELEC490	Complex Analysis and discrete Mathematics	3	3	0	MATH325/L
ELEC412	Control Systems	3	3	0	ELEC331
ELEC410	Electrical Machines	3	3	0	ELEC312
ELEC492	Electrical Machines and Power	1*	0	2	ELEC414
	Electronics Lab				ELEC410
ELEC511	Power System Analysis	3	3	0	ELEC410
ELEC512	Electric Drives	3	3	0	ELEC410, ELEC414
ELEC575	Graduation Project	6	0	6	120 credits

Department Electives: Core Course= 16 Credits							
Course	Course Name	Credit	Conta	ct Hours	Pre-requisites/Co-		
Code		Hours	Theory	Practical	- requisites		
ELEC510	Special Topics in Power Engineering	3	3	0	ELEC414		
ELEC519	Electrical Machine Design	3	3	0	ELEC410		
ELEC513	Advanced Power Systems	3	3	0	ELEC511		
ELEC514	High Voltage Engineering	3	3	0	ELEC511		
ELEC515	Advanced Control Systems	3	3	0	ELEC412		
ELEC516	Sustainable & Renewable Energy sources	3	3	0	ELEC511		
ELEC518	Power System Protection	3	3	0	ELEC511		
ELEC521	Microelectronics	3	3	0	ELEC322		
ELEC522	Electronic Communication Circuits	3	3	0	ELEC431		
ELEC523	Digital System Design	3	3	0	ELEC322		
ELEC442	Embedded Systems	3	3	0	ELEC341		
ELEC532	Digital Communication	3	3	0	ELEC431		
ELEC533	Mobile Communication	3	3	0	ELEC532		
ELEC534	Microwave Engineering	3	3	0	ELEC312		
ELEC535	Optical Fiber Communication	3	3	0	ELEC532		
ELEC536	Special Topics in Electronics and Communication Engineering	3	3	0	ELEC431		
ELEC461	Computer Networks	3	3	0	ELEC431		
ELEC571	Industrial Automation	3	3	0	ELEC512		
ELEC572	Robotics	3	3	0	ELEC442		
ELEC573	Engineering Economics and Management	3	3	0	Final year		
ELEC591	Communication Engineering Lab	1*	0	2	ELEC431		
ELEC592	Power System Lab	1*	0	2	ELEC511		