



Structure

For

S.Y to Final Year B.Tech

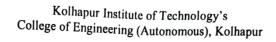
Electrical Engineering

(Under Graduate Program)

With effect from

Academic Year: 2022-23







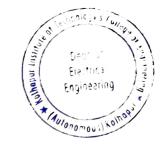
Draft Structure and Curriculum for S.Y. B.Tech in Electrical Engineering Teaching and Evaluation Scheme

YEAR / SEMESTER - S.Y.B-Tech, Sem-III

Course	Course	Curriculum		Teacl	hing S	cheme	Ev	aluation S	chem	e
Code		Component	L	Т	P	Credits	Comp onent	Max Marks	- 1	Min Iarks
UELC0301	Electrical Machines	PC	04	-	-	04	ISE-I MSE ISE-II	10 30 10	20	40
	4 1 0		-				ESE	50	20	
UELC0302	Analog & Digital Electronics	PC	04	-	-	04	ISE-I MSE ISE-II	10 30 10	20	40
UELC0303	Electrical Circuit	ES	02	0.1			ESE ISE-I MSE	50 10 30	20	
	Analysis Electrical	ES	03	01	-	04	ISE-II ESE	10 50	20 40	
UELC0304	Power Generation Systems	PC	03	-	-	03	ISE-I MSE ISE-II	10 30 10	20	40
UELC0305	Engineering Mathematics- III	BS	03	01	-	04	ESE ISE-I MSE ISE-II	50 10 30 10	20	40
UELA0361	Constitution Of India.	HS	02	-	-	-	ESE ESE	50 100	40	40
	Audit Course-I DC Machines									
UELC0331	Lab	PC	- ,	-	02	01	ISE ESE (POE)	25 50	20	0
UELC0332	Analog& Digital Electronics Lab	PC	-	-	02	01	ISE ESE	25	20	0
UELC0333	Electrical Circuit Analysis Lab	ES	-	-	02	01	(POE) ISE ESE	50	20	
	Total		18	02	06	22	(OE)	750	300	

Mrs. S. A. Sarkar BoS-Member Secretary

Dr. V. S. Bugade BoS - Chairman



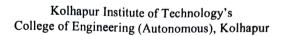


Draft Structure and Curriculum for S.Y. B.Tech in Electrical Engineering Teaching and Evaluation Scheme YEAR / SEMESTER – S.Y.B -Tech, Sem - IV

Course	Course	Curriculum	1	Tea	ching	Sch	ieme	Eva	aluation S	Schem	e
Code	Course	Component	L	T	F	•	Credits	Compo nent	Max Marks	1	Min larks
						\neg		ISE-I	10	171	arks
UELC0401	Power	PC	0.2		- 1		0.0	MSE	30	20	
CEECOTOT	Electronics	PC	03	-	-		03	ISE-II	10	7 20	40
								ESE	50	20	+
								ISE-I	10	120	
UELC0402	Feedback	PC	04				0.4	MSE	30	20	
02200102	Control System	PC	04	-	-		04	ISE-II	10	1 20	40
								ESE	50	20	1
	Electrical Power					\top		ISE-I	10	120	
UELC0403	Transmission	D.C.	0.2					MSE	30	20	
OLLC0403	&Distribution	PC	03	-	-		03	ISE-II	10	20	40
	&Distribution							ESE	50	20	1
								ISE-I	10	20	
UELC0404	Electromagnetic	FG						MSE	30	20	
UELC0404	Fields	ES	03	01	-		04	ISE-II	10	20	40
								ESE	50	20	
						+		ISE-I	10	20	
UELC0405	Signals &	D.C.	0.2					MSE	30	20	
UELC0403	Systems	PC	03	01	-		04	ISE-II		20	40
							ŀ	ESE	50	20	
UELA0461	Environmental studies	HS	02	-	-		-	ESE	100	40	40
	Audit Course-II										
UELC0431	Power	D.C.			02		01	ISE	25	10)
OELC0431	Electronics Lab	PC	-	-	02		01	ESE (POE)	50	20)
	Feedback							ISE	25	10	
UELC0432	Control System Lab	PC	-	-	02		01	ESE (OE)	50	20	
HEL COASS	AC Machines	20						ISE	25	10	
UELC0433	Lab	PC		-	02		01	ESE (POE)	50	20	
UELC0434	Min Project-I	PRJ	-	-	02		01	ISE	25	10	
	Total	CONTACT HO	18	02	08		22	-	750	300)

Mrs. S. A. Sarkar BoS-Member Secretary Dr. V. S. Bugade BoS - Chairman







Note:

• ESE :End Semester Examination,

• MSE: Mid Semester Examination,

ISE: In Semester Evaluation.

HS: Humanities, Social Science and Management,

• BS: Basic Sciences including Mathematics

• ES: Engineering Science, PC: Program Core, PE: Program Elective

• OE: Open elective, PRJ: Project work, Seminar, Internship in industry etc.

List of Audit Courses - Semester III and IV

Year	Audit Course	Course Code	Audit Course
Second Year B.Tech-I	Audit Course-I	UELA0361	Constitution Of India.
Second Year B.Tech-II	Audit Course-II	UELA0461	Environmental Studies.

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Dr. V. S. Bugade BoS - Chairman



Dept of Electrical Engineering

Draft Structure and Curriculum for T.Y. B.Tech. in Electrical Engineering Teaching and Evaluation Scheme YEAR/SEMESTER-T.Y. B.Tech, Sem-V

Constitution		Curriculum	Г	each	ing Sc	cheme	Eva	luation S	chem	e
Course Code	Course	Component	L	T	P	Credits	Comp onent	Max Marks		lin irks
							ISE-I	10		
	Power System	20				0.4	MSE	30	20	40
UELC0501	Protection	PC	04	-		04	ISE-II	10		40
				-			ESE	50	20	
							ISE-I	10	20	
1151 00500	Electric Vehicles	D.C.	0.4			04	MSE	30		40
UELC0502	Technologies	PC	04	-		04	ISE-II	10		40
				-			ESE	50	20	
							ISE-I	10	20	
LIEL 00500)	D.C.	04			04	MSE	30		40
UELC0503	Microcontrollers	PC	04	-		04	ISE-II	10		40
				-		A	ESE	50	20	
							ISE-I	10	20	
	Program	PE-I					MSE	30		
UELE054X		PD-1	03	-		03	ISE-II	10		40
	Elective-I			-			ESE	50	20	
	Open					,	ISE-I	10	20	
***** ****	Elective-I	OF I	03			03	MSE	30		40
UELO058*		OE-I	0.3	-		03	ISE-II	10		40
				-			ESE	50	20	
UELA0561	Audit Course-III	HS	02				E	SE	100	40
	D C .	D.C.					ISE	25	1	0
UELC0531	Power System Protection Lab	PC		-	02	01	ESE (POE)	50	2	20
							ÎSE	25	1	0
UELC0532	Electric Vehicle Lab	PC		-	02	01	ESE (OE)	25	1	0
) (*)						ISE	25	1	0
UELC0533	Microcontroller Lab	PC		-	02	01	ESE (POE)	50		20
UELC0534	Mini Project-II	PRJ	-,,	-	02	01	ISE	50	2	20
	Total				08	22	-	750	3	00

TOTAL CONTACT HOURS = 28, TOTAL CREDITS = 22

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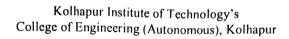
Draft Structure and Curriculum for T.Y. B. Tech. in Electrical Engineering Teaching and Evaluation Scheme YEAR / SEMESTER-

T.Y. B.Tech, Sem. - VI

Course		Curriculum Component	Г	eachi	ng Sch	eme	Eva	luation S	cheme	;
Code	Course	Component	L	Т	P	Credi ts	Compo nent	Max Marks		lin arks
	Industrial						ISE-I	10		
	Drives and	20					MSE	30	20	
UELC0601	Control	PC	04			04	ISE-II	10		40
							ESE	50	20	
	Power						ISE-I	10		
I I CO (02	System	D.C.				0.4	MSE	30	20	40
UELC0602	Analysis	PC	04			04	ISE-II	10		40
							ESE	50	20	
	IOT						ISE-I	10	20	
UELC0603	Electrical	PC				0.4	MSE	30		40
UELC0603	Engineering	PC	04			04	ISE-II	10		40
							ESE	50	20	
							ISE-I	10		
	Program						MSE	30	20	
UELE064X	Elective-II	PE-II	03			03	ISE-II	10		40
							ESE	50	20	
	Open						ISE-I	10	20	
	Elective-II						MSE	30	20	
UELO068*	Elective-II	OE-II	03			03	ISE-II	10	20	40
							ESE	50	20	
								100	20	
UELA0661	Audit Course- IV	ES	02				ESE			10
	Industrial	PC					ISE	25	1	10
UELC0631	Drives and Control Lab				02	01	ESE (POE)	50	2	20
	Power					•	ISE	25	1	0
UELC0632	System Analysis Lab	PC			02	01	ESE (POE)	50	2	20
	IOT						ISE	25	1	0
UELC0633	Electrical Engineering Lab	PC			02	01	ESE (OE)	25		.0
UELC0634	Industry 4.0 Lab	PC			02	01	ISE	50	2	20
	Total		20		08	22		750	_ 3	00
-	TOTA	AL CONTACT H	OURS	S=28	TOTA	L CREDI	TS = 22	#1	-> \	

Mrs. S. A. Sarkar BoS-Member Secretary Dr. V. S. Bugade BoS - Chairman







Note:-

- HS: Humanities, Social Science and Management,
- BS: Basic Sciences including Mathematics
- ES: Engineering Science,
- PC: Program Core,
- PE: Program Elective
- OE: Open elective, PRJ: Project work, Seminar, Internship in industry etc.
- *: Course code for Open Elective
- X :Course code for Program Elective

List of Program Electives-Semester V and VI

Year	Program Elective	Course Code	Course Name
Third Year B.Tech -Sem-V		UELE0541	Utilization of Electrical Energy
	Program Elective-I	UELE0542	Electrical Auditing and Management.
Third Year B.Tech -Sem-VI	Program Elective-II	UELE0641	Power Quality and Harmonics (PQH)
		UELE0642	Flexible AC transmission
			systems(FACTS)

List of Open Electives offered to other programs- Semester VI

	rici ca to other p	rograms be	inester vi
Year	Open Elective	Course Code	Course Name
Third Year B.Tech-Sem-V	Open Elective-I	UELE0581	Solar Photovoltaic System Design
		UELE0582	Renewable Energy Sources
Third Year B.Tech-Sem-VI	Open Elective-II	UELO0681	Electric Vehicles Technologies
		UELO0682	Electric Motors & its Control

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List of Audit Courses - Semester V and VI

Year	Audit Course	Course Code	Course Name
Third Year B.Tech- Sem-V	Audit Course- III	UELA0511	NPTEL / Course Era /MOOCS
Third Year B.Tech- Sem-VI	Audit Course- IV	UELA0611	NPTEL / Course Era /MOOCS

Note: BoS Chairman has to decide the Audit Course -III in accordance with Curriculum Component Humanities Science(as mentioned in structure)& Audit Course-IV in accordance with Curriculum Component Engineering Science (as mentioned in structure)before the commencement of Semester over NPTEL / Course Era /MOOCS platform, examination of Audit Course will be conducted at Institute level.

Mrs. S. A. Sarkar BoS-Member Secretary

Dr. V. S. Bugade BoS - Chairman





Draft Structure and Curriculum for Final Year B.Tech. in Electrical Engineering Teaching and Evaluation Scheme

YEAR / SEMESTER - FINAL YEAR B.Tech, Sem. - VII

UELC0703 UELC0704	Course		Teaching Scheme			eme	Evaluation Schem			e	
UELC0702 UELC0703 UELC0704		Curriculum Component	L	Т	P	Credits	Comp onent	Max Marks		lin arks	
UELC0702 UELC0703 UELC0704							ISE-I	10	1414	II KS	
UELC0702 UELC0703 UELC0704							MSE	30	20		
UELC0702 UELC0703 UELC0704	Industrial	PC	03			03	ISE-II	10	20	40	
UELC0703 UELC0704	Automation						ESE	50			
UELC0703 UELC0704							ISE-I	10			
UELC0703 UELC0704							MSE	30	20		
UELC0703 UELC0704	Electrical	PC	04			04	ISE-II	10	20	40	
UELC0704	Machine Design						ESE	50	20	\dashv	
UELC0704							ISE-I	10			
UELC0704							MSE	30	20		
UELC0704	Smart Grid	PC	03			03	ISE-II	10	20	40	
	omart or a						ESE	50	20	5	
								SE-I 10			
	Advanced	PC					MSE		20		
LIEL EOZAV	Control		03			03	ISE-II	10	1	40	
LIEL FO74V	Systems						ESE	50	20	1	
HELEO74V							ISE-I	10			
TIPL PATAV		PE 111					MSE	30	20		
UELE074X	Program	PE-III	03			03	ISE-II	10		40	
	Elective-III						ESE	50	20	20	
							ISE	25		10	
UELC0731	Industrial Automation Lab	PC			02	01	ESE (POE)	50		20	
	Electrical						ISE	25		10	
UELC0732	Machine Design	PC			02	01	ESE (OE)	50		20	
	Lab						ISE-I	50		20	
UELC0733	Project-I	PRJ			04	02	ISE-II	50		20	
	Total		16		08	20		750		300	

TOTAL CONTACT HOURS = 24, TOTAL CREDITS = 20

Mrs. S. A. Sarkar BoS-Member Secretary Dr. V. S. Bugade BoS – Chairman



Electrical Engineering

Draft Structure and Curriculum for Final Year B.Tech. in Electrical Engineering Teaching and Evaluation Scheme

YEAR / SEMESTER - FINALYEAR. B.Tech. Sem.- VIII

		Curriculum	Т	eachin	g Sch	eme	Evaluation Scheme			
Course Code	Course	Component Component		T	P	Credits	Comp onent	Max Marks		in rks
							ISE-I	10		
	Program					03	MSE	30	20	40
UELC084X	Elective-IV	PE-IV	03			03	ISE-II	10		40
	Diccirc 1						ESE	50	20	
							ISE-I	10		
	Program					0.2	MSE	30	20	40
UELC085X	Elective-V	PE-V	03		,	03	ISE-II	10		40
	Dicourre .						ESE	50	20	
							ISE-I	75	60	
							ISE-II	75		
UELC0831	Project-II	PRJ	-,	-	08	04	ESE (OE)	100	40	100
UELC0832	Internship	PRJ	-	-	04	02	ISE-I	50	20	
OLLC0032	memomp						ISE-II	50	20	40
			06	-	12	12		500	2	200

TOTAL CONTACT HOURS = 18, TOTAL CREDITS =12

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Mrs. S. A. Sarkar

BoS-Member Secretary

Dr. V. S. Bugade

BoS – Chairman





List of Professional Electives- Semester VII and VIII

Year	Program Elective	Course Code	Course Name
Final Year B. Tech-	Program Elective-III	UELC0741	Special Electrical Machines
Sem - VIII			Electric Vehicle Design
	Program Floative IV	UELC0841	Power System Operation and Control
Final Year	Program Elective-IV	UELC0842	Battery Management System
B. Tech- Sem - VIII	December 11	UELC0851	Reactive Power Control in Electric Power Systems
	Program Elective-V	UELC0852	ANN With Applications to Power Systems

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