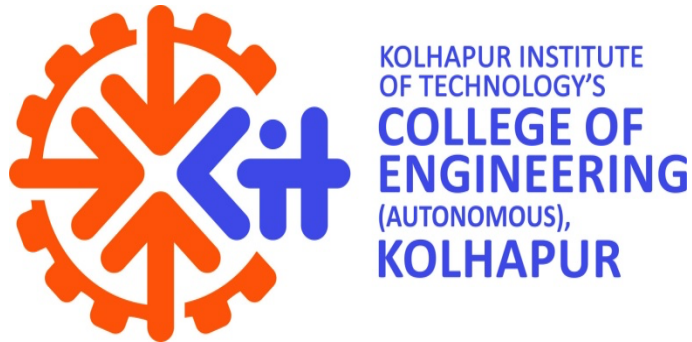# Department of Electrical Engineering

Structure-

Second Year (B.Tech.)

Electrical Engineering
(Under Graduate Program)

From Academic Year
2019- 20

Teaching and Evaluation scheme for
Second Year B.Tech. Program in Electrical Engineering Semester-III

Course Code	Curriculum component	Course	L	T	P	Credits	Scheme	Max	Min	
UELE0301	PC	DC Motors and Transformers	3	1	-	4	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0302	PC	Analog Electronics	3	-	-	3	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0303	PC	Measurement and Instrumentation	3	-	-	3	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0304	PC	Electrical Circuit Analysis	3	1	-	4	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0305	BS	Engineering Mathematics - III	3	1	-	4	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0361	Audit Course-I HS	Professional Ethics & Value Education	2	-	-	-	-	100	40	40
UELE0331	PC	DC Motors and Transformers LAB	-	-	2	1	ISE	25	10	
							ESE(POE)	50	20	
UELE0332	PC	Analog Electronics LAB	-	-	2	1	ISE	25	10	
							ESE(POE)	50	20	
UELE0333	PC	Measurement and Instrumentation LAB	-	-	2	1	ISE	25	10	
							ESE(OE)	50	20	
UELE0334	PC	Electrical Circuit Analysis LAB	-	-	2	1	ISE	25	10	
Total			17	3	8	22	-	850	340	

Total Credits: 22
Total Contact Hours/Week: 28

Kolhapur Institute of Technology's
College of Engineering (Autonomous), Kolhapur

Teaching and Evaluation scheme for
Second Year B.Tech. Program in Electrical Engineering Semester-IV

Course Code	Curriculum component	Course	Teaching scheme				Evaluation Scheme			
			L	T	P	Credits	Scheme	Max	Min	
UELE0401	PC	AC Machines	3	-	-	3	ISE-I	10		40
							MSE	30		
							ISE-II	10	20	
							ESE	50		
UELE0402	PC	Digital Electronics	3	-	-	3	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0403	PC	Power System Economics	3	1	-	4	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0404	PC	Electromagnetic Fields	3	1	-	4	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0405	PC	Signals and Systems	3	1	-	4	ISE-I	10		40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0461	Audit Course-II HS	Environmental Studies	2	-	-	-	--	100	40	40
UELE0431	PC	AC Machines LAB	-	-	2	1	ISE	25	10	
							ESE(POE)	50	20	
UELE0432	PC	Digital Electronics LAB	-	-	2	1	ISE	25	10	
							ESE(POE)	50	20	
UELE0433	PC	Software LAB- I	-	-	2	1	ISE	50	20	
UELE0441	PRJ	Mini Project-I	-	-	2	1	ISE	50	20	
Total			17	3	08	22	-	850	340	

Total Credits: 22
Total Contact Hours/Week: 28

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:** Professional Core,**PE:** Professional Elective

- **OEL:** 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	UELE0361	Professional Ethics and Value Education
Second Year B.Tech-II	Audit Course-II	UELE0461	Environmental Studies

<u>Department of Electrical engineering</u>

Structure

For

Third Year (B. Tech.)

Electrical Engineering
(Under Graduate Program)

**From Academic Year
2020-21**

Teaching and Evaluation scheme for
Third Year B.Tech. Program in Electrical Engineering Semester-V

Course Code	Curriculum Component	Course	L	T	P	Credits	Scheme	Max	Min	
UELE0501	PC	Feedback Control System	3	1	-	4	ISE-I	10		
							MSE	30	-	40
							ISE-II	10		
							ESE	50	20	
UELE0502	PC	Microprocessor and Microcontroller	3	-	-	3	ISE-I	10		
							MSE	30	-	40
							ISE-II	10		
							ESE	50	20	
UELE0503	PC	Power Electronics	3	1	-	4	ISE-I	10		
							MSE	30	-	40
							ISE-II	10		
							ESE	50	20	
UELE0504	PC	Power Transmission and Distribution	4	-	-	4	ISE-I	10		
							MSE	30	-	40
							ISE-II	10		
							ESE	50	20	
UELE052x	PE	Professional Elective-I	3	-	-	3	ISE-I	10		
							MSE	30	-	40
							ISE-II	10		
							ESE	50	20	
UELE0561	Audit course-III ES	Electrical Engineering Materials	2	-	-	-	-	100	40	40
UELE0531	PC	Feedback Control System LAB	-	-	2	1	ISE	25	10	
							ESE(POE)	50	20	
UELE0532	PC	Microprocessor and Microcontroller LAB	-	-	2	1	ISE	25	10	
							ESE(POE)	50	20	
UELE0533	PC	Power Electronics LAB	-	-	2	1	ISE	25	10	
							ESE(OE)	25	10	
UELE0541	PRJ	Mini Project-II	-	-	2	1	ISE	50	20	
Total			**18**	**2**	**8**	**22**	**-**	**850**	**340**	

Total Credits: 22
Total Contact Hours/Week: 28

Teaching and Evaluation scheme for
Third Year B.Tech. Program in Electrical Engineering Semester-VI

Course Code	Curriculum Component	Course	L	T	P	Credits	Scheme	Max	Min	
UELE0601	PC	Power System Stability and Control	3	1	-	4	ISE-I	10	-	40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0602	PC	Switchgear and Protection	3	1	-	4	ISE-I	10		40
							MSE	30	-	
							ISE-II	10		
							ESE	50	20	
UELE0603	PC	Electric and Hybrid Vehicles	4	-	-	4	ISE-I	10		40
							MSE	30	-	
							ISE-II	10		
							ESE	50	20	
UOELE069*	OE	Open Elective I	3	-	-	3	ISE-I	10		40
							MSE	30	-	
							ISE-II	10		
							ESE	50	20	
UELE062x	PE	Professional Elective-I	3	-	-	3	ISE-I	10		40
							MSE	30	-	
							ISE – II	10		
							ESE	50	20	
UELE0661	Audit Course-IV HS	Industrial Management and Operations Research	2	-	-	-	-	100	40	40
UELE0631	PC	Power System LAB	-	-	4	2	ISE	50	20	
							ESE (POE)	50	20	
UELE0632	PC	Switchgear and Protection LAB	-	-	2	1	ISE	25	10	
							ESE(POE)	50	20	
UELE0633	PC	Electrical Workshop	-	-	2	1	ISE	25	10	
							ESE(OE)	50	20	
Total			**18**	**2**	**8**	**22**	-	**850**	**340**	

Total Credits: 22
Total Contact Hours/Week: 28

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:** Professional Core, **PE:** Professional Elective
- **OEL:** Open elective, **PRJ**: Project work, Seminar, Internship in industry etc.
- *:Course code for Open Elective
- x : Course code for Professional Elective
- $: Course code for Audit Course

List of Professional Electives –Semester V and VI

Year	Professional Elective	Course Code	Course Name
Third Year B.Tech-I	Professional Elective-I	UELE0521	Renewable Energy System
		UELE0522	Illumination Engineering
Third Year B.Tech-II	Professional Elective-II	UELE0621	HVDC Transmission System and FACTS
		UELE0622	Electrical Machine Design

List of Open Electives offered to other programs -Semester VI

Year	Open Elective	Course Code	Course Name
Third Year B.Tech-II	Open Elective-I	UOELE0691	Solar power Technology
		UOELE0692	Electric Motors & its Control

List of Audit Courses- Semester V and VI

Year	Audit Course	Course Code	Course Name
Third Year B.Tech-I	Audit Course-III	UELE0561	Electrical Engineering Materials
Third Year B.Tech-II	Audit Course-IV	UELE0661	Industrial Management and Operations Research

Kolhapur Institute of Technology's
College of Engineering (Autonomous), Kolhapur

Department of Electrical engineering

Structure-

Final Year B.Tech.

Electrical Engineering
(Under Graduate Program)

**From Academic Year
2021-22**

Teaching and Evaluation scheme for
Final Year B.Tech. Program in Electrical Engineering Semester-VII

Course Code	Curriculum Component	Course	Teaching scheme				Evaluation Scheme			
			L	T	P	Credits	Scheme	Max	Min	
									Weightage	
UELE0701	PC	Electrical Drives and Control	3	-	-	3	ISE-I	10	20	40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0702	PC	High Voltage Engineering	3	-	-	3	ISE-I	10	20	40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0703	PC	PLC & SCADA	3	-	-	3	ISE-I	10	20	40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE072x	PE	Professional Elective-III	3		-	3	ISE-I	10	20	40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UOEL079*	OE	Open Elective-II	3	-	-	3	ISE-I	10	20	40
							MSE	30		
							ISE-II	10		
							ESE	50	20	
UELE0761	Audit-V / HS	Intellectual Property Rights	2	-	-	-	-	100	40	40
UELE0731	PC	Electrical Drives and Control LAB	-	-	2	1	ISE	25	10	
							ESE(POE)	50	20	
UELE0732	PC	Electric & hybrid vehicles lab	-	-	2	1	ISE	25	10	
							ESE(OE)	50	20	
UELE0733	PC	Software Lab II	-	-	2	1	ISE	25	10	
UELE0751	PRJ	Project- I	-	-	4	2	ISE	25	10	
							ESE(OE)	50	20	
Total			**17**	**0**	**10**	**20**	-	**850**	**340**	

Total Credits: 20
Total Contact Hours/Week: 27

Teaching and Evaluation scheme for
Final Year B.Tech. Program in Electrical Engineering Semester-VIII

Course Code	Curriculum component	Course	Teaching scheme				Evaluation Scheme				
			L	T	P	Credits	Scheme	Max	Weightage Min		
UELE082x	PE	Professional Elective-IV	3	-	-	3	ISE-I	10			
							MSE	30	20		40
							ISE-II	10			
							ESE	50	20		
UELE082x	PE	Professional Elective–V	3	-	-	3	ISE-I	10			
							MSE	30	20		40
							ISE-II	10			
							ESE	50	20		
UELE0851	PRJ	Project-II	-	-	12	6	ISE-I	75			120
							ISE-II	75			
							ESE (OE)	100	40		
							ESE(OE)	50	20		
Total			**6**	**0**	**12**	**12**	**-**	**500**			**200**

Total Credits: 12
Total Contact Hours/Week: 18

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:** Professional Core,**PE:** Professional Elective
- **OEL:** Open elective, **PRJ:** Project work, Seminar, Internship in industry etc.
- * : Course code for Open Elective
- X : Course code for Professional Elective
- $: Course code for Audit Course

List of Professional Electives- Semester VII and VIII

Year	ProfessionalElective	Course Code	Course Name
Final Year B.Tech-I	Professional Elective-III	UELE0721	Electrical Energy Management
		UELE0722	Advanced Electrical Drives
Final Year B.Tech-II	Professional Elective-IV	UELE0821	Smart Grid
		UELE0822	Advanced Power Electronics
Final Year B.Tech-II	Professional Elective-V	UELE0823	Power Quality
		UELE0824	Digital Signal Processing For Electrical Engineers

List of open Electives offered to other programs-Semester VII

Year	Open Elective	Course Code	Course Name
Final Year B.Tech-I	Open Elective-II	UOELE0791	Electric and Hybrid Vehicles
		UOELE0792	Energy Audit
		UOELE0793	Industrial Automation

List of Audit Courses- Semester VII

Year	Audit Course	Course Code	Course Name
Final Year B.Tech-I	Audit Course-V	UELE0761	Intellectual Property Rights