

III SEMESTER.

S.No	Course Code	Course Title	Teaching Scheme			Evaluation Scheme			Credits
			L	T	P	MSE	CA	ESE	
1	BTBSC301	Engineering Mathematics-III	3	1	0	20	20	60	4
2	BTEEC302	Network Analysis and Synthesis	2	1	0	20	20	60	3
3	BTEEC303	Fluid Mechanics and Thermal Engineering	2	1	0	20	20	60	3
4	BTEEC304	Measurement and Instrumentation	2	1	0	20	20	60	3
5	BTEEE305A BTEEE305B BTEEE305C	Elective -I (A) Electrical Engineering Materials (B) Applied Physics (C) Signals and Systems	3	0	0	20	20	60	3
6	BTHM3401	Basic Human Rights	2	0	0	-	20	-	Audit
7	BTHM306	Engineering Economics	2	0	0	20	20	60	2
8	BTEEL307	Network Analysis and Synthesis Lab	0	0	2	-	60	40	1
9	BTEEL308	Measurement and Instrumentation Lab	-	0	4	-	60	40	2
10	BTEEM309	Electrical workshop/ Mini project	-	-	2	-	60	40	1
11	BTEEF310	Field Training/ Internship/ Industrial Training Evaluation						50	1
TOTAL			16	04	08	120	320	530	23

IV SEMESTER.

1	BTEEC401	Electrical Machine-I	3	1	0	20	20	60	4
2	BTEEC402	Power System-I	2	1	0	20	20	60	3
3	BTEEC403	Electrical Installation and Estimation	2	1	0	20	20	60	3
4	BTEEC404	Numerical Methods and Programming	2	1	0	20	20	60	3
5	BTID405	Product Design Engineering	1	0	2	30	30	40	2
6	BTEEE-406A BTEEE-406B BTEEE-406C	Elective -II (A) Solid State Devices (B) Analog and Digital electronics (C) Electromagnetic Theory	2	0	0	20	20	60	2
7	BTEEOE407-A BTEEOE407-B BTEEOE407-C	Elective -III (A) Industrial safety (B) Introduction to Non-Conventional energy sources (C) Software Techniques.	2	0	0	20	20	60	2
8	BTEEL408	Electrical Machine-I Lab	0	0	2	-	60	40	1
9	BTEEL409	Power System lab-I	0	0	2	-	60	40	1
10	BTEEL410	Numerical Methods and Programming Lab	-	0	2	-	60	40	1
11	BTEEL411	Elective-II Lab	0	0	2	-	60	40	1
12		Field Training / Internship/ Industrial Training (minimum 4 weeks which can be completed partially in Third semester and Fourth Semester or in at one time.)							Credits to be evaluated in V Sem
TOTAL			15	04	10	140	380	580	23

CODE	Semester-I Subject	Contact hr/week				Examination scheme						Duration Th Exam
		L	T	P	TOTAL	CT	TH	TW	P/O	TOTAL		
SH/201	Mathematics-III	4	-	-	4	20	80	-	-	-	100	3 hrs
ED/202	Transformers and DC machines	4	-	-	4	20	80	-	-	-	100	3 hrs
ED/203	Electrical Measuring techniques	4	-	-	4	20	80	-	-	-	100	3 hrs
ED/204	Electrical power Generation and its Economics	4	-	-	4	20	80	-	-	-	100	3 hrs
ED/205	Electrical Engineering Materials	4	-	-	4	20	80	-	-	-	100	3 hrs
EED/206	Electronic Devices and Circuits	4	-	-	4	20	80	-	-	-	100	3 hrs
ED/221	LAB-I : Transformers and DC machines	-	-	2	2	-	-	-	-	50	50	
ED/222	LAB-II: Electrical Measuring techniques			2	2	-	-	-	-	50	50	
ED/223	LAB-II: Electrical power Generation and its Economics			2	2	-	-	50	-	-	50	
ED/224	LAB-IV: Electrical Engineering Materials			2	2	-	-	-	-	50	50	
EED/225	LAB V: Electronic Devices and Circuits			2	2	-	-	-	-	50	50	
ED/226	LAB-VI Fundamentals of PLC			2	2	-	-	50	-	-	50	
	Total	20		10	30	100	400	100	150	750		

L: Lecture T: Tutorial P: Practical CT: Class Test TH: Theory TW: Term work P/O: Practical / Oral

*Electronic Devices and Circuits (EDC) subject only for Electrical Electronics Engineering Branch

CODE	Subject	Contact hr/week					Examination scheme							DURAT TH. Ex
		L	T	P	TOTAL	CT	TH	TW	P	TOTAL				
EE2122	Mathematics IV	4	-	-	4	20	80	-	-	100	3 hrs			
EE2123	AC machines	4	-	-	4	20	80	-	-	100	3 hrs			
EE2124	Network Analysis	4	-	-	4	20	80	-	-	100	3 hrs			
EE2125	Electrical Power Transmission and Distribution	4	-	-	4	20	80	-	-	100	3 hrs			
EE2126	Analog and Digital circuits	4	-	-	4	20	80	-	-	100	3 hrs			
EE2127	LAB-III: AC machines	-	-	2	2	-	-	80	-	80				
EE2127	LAB-VIII: Network Analysis	-	-	2	2	-	-	80	-	80				
EE2127	LAB-IX: Electrical Power transmission and distribution	-	-	2	2	-	-	80	-	80				
EE2124	LAB-X: Analog and Digital Circuits	-	-	2	2	-	-	80	-	80				
EE2125	LAB-XI: Communication Skill	-	2	-	2	-	-	80	-	80				
	Total	20	2	8	30	100	400	100	150	750				

L: Lecture T: Tutorial P: Practical CT: Class Test TH: Theory TW: Term work P/O: Practical / Oral

(Electronics and Power)/ Electrical & Electronics Engg / Electrical & Power Engg .

V Semester

Course Code	Course Name	Teaching Scheme			Evaluation Scheme				Credits
		L	P	T	Int	MSE	ESE	Total	
BTEEC501	Electrical Machine-II	3	0	1	20	20	60	100	4
BTEEC502	Power System-II	3	0	1	20	20	60	100	4
BTEEL503	Microprocessor and micro Controller	3	0	0	20	20	60	100	3
BTHM504	Value Education, Human Rights and Legislative Procedures [MOOC/Swayam/NPTEL]	2	0	0	-	-	-	Audit course	0
BTEEE505	Elective-IV	3	0	0	20	20	60	100	3
BTEEOE506	Elective-V	3	0	0	20	20	60	100	3
BTEEL507	Electrical Machine-II Lab	0	4	0	60	-	40	100	2
BTEEL508	Power System-II Lab	0	2	0	30	-	20	50	1
BTEEL509	Microprocessor and micro Controller Lab	0	2	0	30	-	20	50	1
BTEEF510	Industrial Training	-	-	-	50	-	-	50	1
	Total	17	08	02	270	100	380	750	22

Elective- IV: 1.illumination engineering 2. Advances in Renewable Energy Sources. 3. Testing and Maintenance of Electrical equipment.

Elective-V: 1.Electrical Mobility, 2. Power Plant Engineering, 3. Design and Analysis of Algorithms

Code	Course Name	Teaching Scheme			Evaluation Scheme				Credits
		L	P	T	Int	MSE	ESE	Total	
BTEEC601	Control System	3	0	1	20	20	60	100	4
BTEEC602	Principles of Electrical Machine Design	3	0	0	20	20	60	100	3
BTEEC603	Power Electronics	3	0	1	20	20	60	100	4
BTEEE604	Elective-VI	3	0	0	20	20	60	100	3
BTEEC605	Elective-VII	3	0	0	20	20	60	100	3
BTEEOE606	Elective-VIII [MOOC/Swayam/NPTEL]	3	0	0	20	20	60	100	3
BTEEL607	Control System- Lab	0	2	0	30	-	20	50	1
BTEEL608	Principles of Electrical Machine Design Lab	0	2	0	30	-	20	50	1
BTEEL609	Power Electronics Lab	0	4	0	60	-	40	100	2
	Total	18	08	02	240	120	440	800	24

Elective-VI Industrial automation and Control 2. Design of Experiments 3. Artificial neural network.

Elective-VII 1. Switch Gear and Protection 2. Computer aided analysis and design 3. Mechatronics

Elective- VIII. 1. Rural Technology and Community Development 2. Project Management 3. Knowledge Management

CODE	Semester -I Subject	Contact hr/week				Examination Scheme					
		L	T	P	Total	CT	TH	TW	P	Total	Duration of Theory Exam
EEP/301	Power System Analysis	4	-		4	20	80			100	3 Hr
EEP/302	Microprocessor and Interfacing	4	-		4	20	80			100	3 Hr
EEP/303	Electromagnetic Fields	4	-		4	20	80			100	3 Hr
EEP/304	Control System Engineering	4	-		4	20	80			100	3 Hr
EEP/305	Elective II	4	-		4	20	80			100	3 Hr
EEP/321	LAB I Power System Analysis	-	-	2	2				50	50	
EEP/322	LAB II Microprocessor and Interfacing	-	-	2	2				50	50	
EEP/323	LAB III Control System Engineering	-	-	2	2			50		50	
EEP/324	LAB IV Elective II	-	-	2	2			50		50	
BSH305	Communication Skill -II (*Term work based on internal online Exam)	2	-	-	2			50*		50	2Hrs
	TOTAL	20	-	10	30	100	400	150	100	750	

Elective II

1. Special Purpose Electrical Machines
2. Digital Electronics
3. Communication Engineering

CODE	Semester -II Subject	Contact hr/week				Examination Scheme					Duration of Theory Exam
		L	T	P	Total	CT	TH	TW	P	Total	
EEP/351	Electrical Machine Design	4	-		4	20	80			100	3 Hr
EEP/352	Testing and Maintenance of electrical equipments	4	-		4	20	80			100	3 Hr
EEP/353	Power Electronics - I	4	-		4	20	80			100	3 Hr
EEP/354	Microcontroller and Applications	4	-		4	20	80			100	3 Hr
EEP/355	Elective III	4	-		4	20	80			100	3 Hr
EEP/371	LAB I Electrical Machine Design	-	-	2	2				25	25	
EEP/372	LAB II Testing and Maintenance of electrical equipments	-	-	2	2				50	50	
EEP/373	LAB III Power Electronics - I	-	-	2	2					50	50
EEP/374	LAB IV Microcontroller and Applications	-	-	2	2					50	50
EEP/375	LAB V Elective III	-	-	2	2					50	50
EEP/376	Seminar								25	25	
	TOTAL	20	-	10	30	100	400	100	150	750	

Elective III

1. Digital System Design
2. Industrial Management
3. Energy conservation and Audit

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

TEACHING & EXAMINATION SCHEME OF TE(EEP/EE/EEE)

CODE	Semester-I SUBJECT	Contact hr/week				Examination scheme					
		L	T	P	Total	CT	TH	TW	P	Total	Duration of Th. Exam
✓ EEP/301	Power System Analysis	4	-	-	4	20	80	-	-	100	3hr
✓ EEP/302	Special Purpose Electrical Machines	4	-	-	4	20	80	-	-	100	3hr
✓ EEP/303	Electromagnetic Fields	4	-	-	4	20	80	-	-	100	3hr
EEP/304	Control System Engineering	4	-	-	4	20	80	-	-	100	3hr
EEP/305	Microprocessor & Interfacing	4	-	-	4	20	80	-	-	100	3hr
EEP/321	LAB-I Power System Analysis	-	-	2	2	-	-	-	50	50	
EEP/322	LAB-II Special Purpose Electrical Machines	-	-	2	2	-	-	-	50	50	
EEP/323	LAB-III Control System Engineering	-	-	2	2	-	-	50	-	50	
EEP/324	LAB-IV Microprocessor & Interfacing			2	2			50		50	
BSH331	Communication Skill-II (*Online Exam)	-	-	2	2	-	-		50*	50	
	TOTAL	20	-	10	30	100	400	100	150	750	

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

TEACHING & EXAMINATION SCHEME OF TEACHER/EEEP/

CODE	Semester-II SUBJECT	Contact hr/week				Examination scheme					Duration of Th. Exam
		L	T	P	Total	CT	TH	SW	P	Total	
EEP/351	Electrical Machine Design	4			4	70	80			150	2hr
EEP/352	Energy Conservation & Audit	4			4	70	80			150	2hr
EEP/353	Power Electronics	4			4	70	80			150	2hr
EEP/354	Testing & Maintenance of Electrical Equipment	4			4	70	80			150	2hr
EEP/355	Microcontroller & Applications	4			4	70	80			150	2hr
EEP/371	LAB-I Electrical Machine Design			2	2			25		25	
EEP/372	LAB-II Energy Conservation & Audit			2	2			50		50	
EEP/373	LAB-III Power Electronics			2	2				50	50	
EEP/374	LAB-IV Testing & Maintenance of Electrical Equipment			2	2				50	50	
EEP/375	LAB-V Microcontroller & Applications			2	2				50	50	
EEP/376	Seminar							25		25	
TOTAL		20		10	30	100	400	100	150	750	

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Teaching & Examination Scheme of BE (EEP/EE/EEE), effective from July 2014 (Year 2014-15)

Semester-I			Contact hr/week				Examination scheme					
Sr. No.	Subject Code	Subject	L	T	P	Total	CT	TH	TW	PR	Total	Duration of Th. Exam
1	EEP/401	Electric Drives	4			4	20	80	-	-	100	3 Hr
2	EEP/402	Power System Protection	4			4	20	80	-	-	100	3Hr
3	EEP/403	Digital Signal Processing	3	1		4	20	80	-	-	100	3Hr
4	EEP/404	Industrial Automation	4			4	20	80	-	-	100	3Hr
		Elective-I										
	EEP/441	1. Industrial Management.										
	EEP/442	2. Neural Network and Fuzzy Logic.										
	EEP/443	3. Flexible AC Transmission system	4			4	20	80	-	-	100	3Hr
	EEP/444	4. Power Electronics-II.										
	EEP/445	5. Recent trends in power systems.										
	EEP/446	6. Digital System Design.										
	EEP/447	7. Open Elective-I.										
5	EEP/421	LAB-I: Electric Drives	-	-	2	2	-	-	-	50	50	
7	EEP/422	LAB-II: Power System Protection	-	-	2	2	-	-	-	50	50	
8	EEP/423	LAB-II: Digital Signal Processing	-	-	2	2	-	-	-	50	50	
9	EEP/424	LAB-IV: Industrial Automation	-	-	2	2	-	-	25	-	25	
10	EEP/425	LAB-V: Elective-I	-	-	2	2	-	-	25	-	25	
11	EEP/426	Project Part-I	-	-	-	-	-	-	-	50	50	
		TOTAL	19	1	10	30	100	400	50	200	750	

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Semester-II			Contact hr/week				Examination scheme					
Sr. No	Subject Code	Subject	L	T	P	Total	CT	TH	TW	PR	Total	Duration of Th. Exam
1	EEP/451	High Voltage Engineering.	4			4	20	80			100	3hr
2	EEP/452	Power System Operation & Control.	4			4	20	80			100	3hr
3	EEP/453	Renewable Energy.	4			4	20	80			100	3hr
4	Elective-II											
	EEP/491	1. Electrical Power Quality.										
	EEP/492	2. Electric Traction & Utilization.										
	EEP/493	3. Electrical System Planning & Design.	4			4	20	80			100	2hr
	EEP/494	4. Illumination Engineering.										
	EEP/495	5. Control System-II.										
	EEP/496 EEP/497	6. Embedded System 7. Open Elective-II.										
5	EEP/471	LAB-I: High Voltage Engineering.			2	2				50	50	
6	EEP/472	LAB-II: Power System Operation & Control.			2	2				50	50	
7	EEP/473	LAB-II: Renewable Energy.			2	2			50		50	
8	EEP/474	LAB-IV: Elective-II			2	2			50		50	
10	EEP/475	Project Part -I			6	6			50	100	150	
TOTAL			16		14	20	80	320	150	200	750	

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CODE	Semester-I Subject	Contact hr/week				Examination Scheme						
		L	T	P	Total	CT	TH	TW	P	Total	Credit	Duration of Theory Exam
EEP/401	Electrical Drives	4	-		4	20	80			100	4	3 Hr
EEP/402	Power System Protection	4	-		4	20	80			100	4	3 Hr
EEP/403	Digital Signal Processing	4	-		4	20	80			100	4	3 Hr
EEP/404	Industrial Automation	4	-		4	20	80			100	4	3 Hr
EEP/441-445	Elective IV	4	-		4	20	80			100	4	3 Hrs
EEP/421	LAB I Electrical Drives	-	-	2	2				50	50	1	
EEP/422	LAB II Power System Protection	-	-	2	2				50	50	1	
EEP/423	LAB III Digital Signal Processing	-	-	2	2				50	50	1	
EEP/424	LAB IV Industrial Automation	-	-	2	2			25		25	1	
EEP/425	LAB V Elective IV	-	-	2	2			25		25	1	
EEP/426	Project Part - I								50	50	1	
	Total	20	-	10	30	100	400	50	200	750	26	

Elective IV

1. EEP/441 Flexible AC Transmission System
2. EEP/442 Power Electronics II
3. EEP/443 Electrical Traction and Utilization
4. EEP/444 Artificial Intelligence
5. EEP/445 Open Elective I

Alternative Teaching and Examination scheme of BE (EEP/EE/EEE) wef A/C Year 2019-20.

CODE	Semester-I Subject	Contact hr/week				Examination Scheme						
		L	T	P	Total	CT	TH	TW	P	Total	Credit	Duration of Theory Exam
EEP/451	High Voltage Engineering	4	-		4	20	80			100	4	3 Hr
EEP/452	Power System Operation & Control	4	-		4	20	80			100	4	3 Hr
EEP/453	Non Conventional Energy Sources and Applications	4	-		4	20	80			100	4	3 Hr
EEP/491-495	Elective V	4	-		4	20	80			100	4	3 Hr
EEP/471	LAB I High Voltage Engineering	-	-	2	2				50	50	1	
EEP/472	LAB II Power System Operation & Control	-	-	2	2				50	50	1	
EEP/473	LAB III Non Conventional Energy Sources and Applications	-	-	2	2			50		50	1	
EEP/474	LAB IV Elective V	-	-	2	2			50		50	1	
EEP/475	Project Part - II	-	-	6	6			50	100	150	6	
	Total	16	-	14	30	80	320	150	200	750	26	

Elective V

1. EEP/491 Electrical Power Quality
2. EEP/492 Electrical System Planning and Design
3. EEP/493 Embedded Systems
4. EEP/495 Control System II
5. EEP/496 Open Elective II

Dr. Babasaheb Ambedkar Technological University, Lonere.

**B.Tech (Electrical Engineering / Electrical Engineering (Electronics and Power)/
Electrical & Electronics Engg / Electrical & Power Engineering)**

Curriculum for Semester VII [Final Year]

Sr. No.	Course Code	Type of Course	Course Title	Hours per week			Evaluation Scheme			Total Marks	Credits
				L	T	P	MSE	CA	ESE		
1	BTEEC701	✓ PCC1	Power System Operation & Control	3	0	0	20	20	60	100	3
2	BTEEC702	✓ PCC2	High Voltage Engineering	3	0	0	20	20	60	100	3
3	BTEEC703	✓ PCC3	Electrical Drives	3	0	0	20	20	60	100	3
4	BTEEE704	PEC1	Elective-IX	3	0	0	20	20	60	100	3
5	BTEEE705	PEC2	Elective-X	3	0	0	20	20	60	100	3
6	BTEEL706	Lab	Power System Operation & Control Lab	0	0	2	--	30	20	50	1
7	BTEEL707	Lab	High Voltage Engineering Lab	0	0	2	--	30	20	50	1
8	BTEEL708	Lab	Electrical Drives Lab	0	0	2	--	30	20	50	1
9	BTEES709	Seminar	Seminar	0	0	2	--	30	20	50	1
10	BTEEP710	✓ Project	Project Part-I	0	0	6	--	30	20	50	3
11	BTEEF711	--	Field Training /Internship/Industrial Training III	--	--	--	--	--	50	50	1
Total				15	0	14	100	250	450	800	23

Elective-IX	Elective-X
A) Special Purpose Electrical Machines	A) Digital Signal Processing
B) Electrical Traction and Utilization	✓ B) Energy Audit and Conservation
C) Engineering System Design and Optimization	✓ C) Electrical Power Quality
D) Financial Management	✓ D) HVDC Transmission and FACTS

Electrical & Electronics Engg / Electrical & Power Engineering)

Curriculum for Semester VIII [Final Year]

Sr. No.	Course Code	Course Title	Hours per week			Evaluation Scheme			Total Marks	Credits
			L	T	P	MSE	CA	ESE		
		1.Power Management Integrated Circuits 2.DC Power Transmission Systems 3.High Power Multilevel Converters 4.Fuzzy Sets, Logic and Systems & Applications 5.The Joy of Computing using Python 6.Introduction to Industry 4.0 and Industrial Internet of Things	3	0	0	20*	20*	60*	100	3
		7.Entrepreneurship Essentials # Student to opt any two subjects from above list	3	0	0	20*	20*	60*	100	3
6	BTEEP803	Project - II	0	0	30	--	100	150	250	15
		Total	6	0	30	40	240	270	450	21

*Six months of Internship in the industry

*Students doing project at institute will have to appear for CA/MSE/ESE

* Student doing project at Industry will give NPTEL examination / Examination conducted by university i.e. CA/MSE/ESE

These subjects are to be studied on self-study mode using SWAYAM/NPTEL/Any other source

Teacher who work as a facilitator for the course should be allotted 3 hrs/week load.

Project Load: 2hrs/week/project.

Mapping of Courses with MOOCs Platform SWYAM / NPTEL

S.N.	Course Name	Duration	Name of Professor	Institute offering Course
1	Power Management Integrated Circuits	12 Weeks	Prof. Qadeer Ahmad Khan	IITM
2	DC Power Transmission Systems	12 Weeks	Prof. Krishna S	IITM
3	High Power Multilevel Converters	12 Weeks	Prof. Anandarup Das	IITD
4	Fuzzy Sets, Logic and Systems & Applications	12 Weeks	Prof. Nishchal Kumar Verma	IITK
5	The Joy of Computing using Python	12 Weeks	Prof. Sudarshan Iyengar Prof. Yayati Gupta	IIT Ropar
6	Introduction to Industry 4.0 and Industrial Internet of Things	12 Weeks	Prof. Sudip Misra	IIT KGP
7	Entrepreneurship Essentials	12 Weeks	Prof. Manoj Kumar Mondal	IIT KGP

1/2/4/5/3/5/6/7