



K.E. Society's
Rajarambapu Institute of Technology, Rajaramnagar
(An Empowered Autonomous Institute, affiliated to Shivaji University, Kolhapur)
Twinning Program

Curriculum Structure and Evaluation Scheme
To be implemented for 2025-29 & 2026-30 Twinning Batch
Department of Electrical Engineering
Rev: EE Course Twinning Structure/RIT/01/2025-29 & 2026-30

B.Tech. in Electrical Engineering



Twinning Program

Curriculum Structure and Evaluation Scheme

To be implemented for 2025-29 & 2026-30 Twinning Batch

Department of Electrical Engineering

Rev: EE Course Twinning Structure/RIT/01/2025-29 & 2026-30

Class: S. Y. B. Tech

Semester: III

Course Code	Course	Teaching Scheme						Evaluation Scheme					
		L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (%Marks)		Practical (%Marks)		
									Max	Min. for passing	Max.	Min. for passing	
EE2015	DC Machines and Transformer	3	-	-	54	90	3	ISE	20	40	40	----	----
								UT1	15		40	----	----
								UT2	15		40	----	----
								ESE	50		40	----	----
EE2151	Electrical Circuit Analysis	3	1	-	72	120	4	ISE	20	40	40	----	----
								UT1	15		40	----	----
								UT2	15		40	----	----
								ESE	50		40	----	----
EE2111	Mathematics for Electrical Engineers	3	-	-	54	90	3	ISE	20	40	40	----	----
								UT1	15		40	----	----
								UT2	15		40	----	----
								ESE	50		40	----	----
EE2131	Power Transmission and Distribution Systems	3	-	-	54	90	3	ISE	20	40	40	----	----
								UT1	15		40	----	----
								UT2	15		40	----	----
								ESE	50		40	----	----
	Online Course-I	-	-	-	90	90	3	ISE	100	50	50	----	----
SH2175	Environmental Science	1	-	2	24	60	2	ISE	50	40	40	----	----
								ESE	50		40	----	----
EE2515	DC Machines and Transformer Lab	-	-	2	6	30	1	ISE	----	----	50	50	50
								ESE	----		50	50	50
EE263	Python Programming Lab	-	-	2	6	30	1	ISE	----	----	50	50	50
								ESE	----		50	50	50
EE2611	Electrical Maintenance and Troubleshooting	-	-	2	6	30	1	ISE	----	----	100	50	50
	Professional Skills Development and Foreign Languages	-	-	2	6	30	1	ISE	-	-	-	100	50
	TOTAL	13	1	10	372	660	22						
	TOTAL CONTACT HOURS	24											

ISE: In Semester Evaluation, UT-I: Unit Test-I, UT-II: Unit Test-II, ESE: End Semester Exam, TW: Term Work, SL: Self Learning

Total Contact Hours/week : 24

Total Credits : 22

Students may opt for an Online course-I approved by the Departmental Program Committee (DPC).

Guidelines for Online Courses-I:

1. The course must be offered through an online MOOC platform such as NPTEL, Udemy, Coursera, NASSCOM, etc.
2. The minimum duration of the course should be 25 to 30 hours. For NPTEL courses, the duration should be at least 8 to 12 weeks.
3. If the duration of an online course is less than the prescribed duration mentioned above, the DPC will assign additional tasks to compensate for the shortfall in contact hours.
4. The evaluation shall be carried out as per the guidelines prescribed by the Departmental Program Committee (DPC).



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Sr. No.	Subject Name		Course Code
1.	Professional Skills Development and Foreign Languages	Professional Leadership Skills	SH2635
2.		Interpersonal Skills	SH2615
3.		Innovation Tools and Methods for Entrepreneurs	SH2695
4.		Personal Effectiveness and Body Language	SH2595
5.		German Language – Level III	SH2735
6.		Japanese Language – Level III	SH2715

Note:

1. A student has to complete any two courses out of six choices offered under Choice Based Professional Skills Development Programme. A course in each semester will be allocated without any repetition.
2. Foreign Language course selected in F. Y. B. Tech Sem-I will remain the same with next levels in Sem-III & IV. (No new entries in S. Y. B. Tech Sem-III)



Class: S. Y. B. Tech

Semester: IV

Course Code	Course	Teaching Scheme						Evaluation Scheme					
		L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (%Marks)		Practical (%Marks)		
									Max	Min. for passing	Max	Min. for passing	
EE2065	Analog and Digital Electronics	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50	40	---	---	
EE2025	AC Machines	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50	40	---	---	
EE2141	Electrical Measurement and Instrumentation	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50	40	---	---	
EE2085	Signals and Systems	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50	40	---	---	
EE218	AI for Electrical Engineers	2	-	-	36	60	2	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50	40	---	---	
	Online Course-II	-	-	-	90	90	3	ISE	100	50		---	--
EE2525	AC Machines Lab	-	-	2	6	30	1	ISE	---	----	--	50	50
								ESE	--	--	--	50	50
EE2545	Analog and Digital Electronics Lab	-	-	2	6	30	1	ISE	---	----	--	50	50
								ESE	---	----	--	50	50
EE2621	Electrical Measurement and Instrumentation Lab	-	-	2	6	30	1	ISE	---	----	--	100	50
EE2701	MOOCS-I**	-	-	-	30	30	1	ISE	---	----		100	50
EE272	AI for Electrical Engineers Lab	-	-	2	6	30	1	ISE	---	----		100	50
	Professional Skills Development and Foreign Languages	-	-	2	6	30	1	ISE	-	-	--	100	50
	TOTAL	14	-	10	402	690	23						
	TOTAL CONTACT HOURS	24											

ISE: In Semester Evaluation, UT-I: Unit Test-I, UT-II: Unit Test-II, ESE: End Semester Exam, TW: Term Work, SL: Self Learning

Total Contact Hours/week : 24

Total Credits : 23

Note: Students are required to undergo industrial training of minimum two weeks in the vacation of Semester-IV and its evaluation will be carried out in the Semester-V.

Note:** MOOCS course certification marks will be carried out for the credits





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Students may opt for an Online course-II approved by the Departmental Program Committee (DPC).

Guidelines for Online Courses-II:

1. The course must be offered through an online MOOC platform such as NPTEL, Udemy, Coursera, NASSCOM, etc.
2. The minimum duration of the course should be 25-30 hours. For NPTEL courses, the duration should be at least 8 to 12 weeks.
3. If the duration of an online course is less than the prescribed duration mentioned above, the DPC will assign additional tasks to compensate for the shortfall in contact hours.
4. The evaluation shall be carried out as per the guidelines prescribed by the Departmental Program Committee (DPC).

Sr. No.	Subject Name		Course Code
1.	Professional Skills Development and Foreign Languages	Professional Leadership Skills	SH2635
2.		Interpersonal Skills	SH2615
3.		Innovation Tools and Methods for Entrepreneurs	SH2695
4.		Personal Effectiveness and Body Language	SH2595
5.		German Language – Level IV	SH2645
6.		Japanese Language – Level IV	SH2625



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Class: T. Y. B. Tech

Semester: V

Course Code	Course	Teaching Scheme						Evaluation Scheme					
		L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (%Marks)		Practical (%Marks)		
									Max	Min. for Passing	Max	Min. for passing	
EE3035	Power System Analysis	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
EE3131	Feedback Control System	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
EE3151	Microcontroller & Its Applications	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
	Program Elective -I	2	-	-	36	60	2	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
	Open Elective-I	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
	Online Course-III	-	-	-	90	90	3	ISE	100	50	--	--	
	Online Course-IV	--	--	--	60	60	2	ISE	100	50	--	--	
SH3036	Scholastic Aptitude-I	2*					Audit	ISE	100	50 (P/NP)	--	--	--
EE3611	Feedback Control System Lab	-	-	2	6	30	1	ISE	--	--	--	50	50
								ESE	--	--	--	50	50
EE3631	Microcontroller Lab	-	-	2	6	30	1	ISE	---	---	--	50	50
								ESE	---	---	--	50	50
EE3591	Advanced Software Lab	-	-	2	6	30	1	ISE	---	---	--	100	50
EE3651	Industrial Training	-	-	-	30	30	1	ISE	---	---	---	100	50
EE3691	Mini Project-I	-	-	6	18	90	3	ISE	---	---	--	50	50
								ESE	---	---	--	50	50
EE3671	MOOCS-II**	-	-	-	30	30	1	ISE	---	----	---	100	50
	TOTAL	14+2* = 16*	-	12	498	810	27						
	TOTAL CONTACT HOURS	28*											

ISE: In Semester Evaluation, UT-I: Unit Test-I, UT-II: Unit Test-II, ESE: End Semester Exam, P = Pass, NP = Not Pass, TW: Term Work, SL: Self Learning

Total Contact Hours/week : 28*

Total Credits : 27

Note*: Students should complete 5 days (30 Hours) of Scholastic Aptitude training program organized by the Institute.

Note:** MOOC-II course certification marks will be carried out for the credits





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Students may opt for an Online course-III & IV approved by the Departmental Program Committee (DPC).

Guidelines for Online Courses-III & IV:

1. The course must be offered through an online MOOC platform such as NPTEL, Udemy, Coursera, NASSCOM, etc.
2. The minimum duration of the course should be 25-30 hours. For NPTEL courses, the duration should be at least 8 to 12 weeks.
3. If the duration of an online course is less than the prescribed duration mentioned above, the DPC will assign additional tasks to compensate for the shortfall in contact hours.
4. The evaluation shall be carried out as per the guidelines prescribed by the Departmental Program Committee (DPC).

Program Elective-I

Sr. No	Course Code	Domain	Course
1	EE3095	Power and Energy Systems	Energy Storages Technologies
2	EE3115		Restructured Power System
3	EE3135	Drives and Control	Digital Signal Processing
4	EE3155		Electrical Utilization and Traction





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Open Elective I			
Sr. No.	Course Code	Open Elective Subject Name	Offered by the department
1	OE3411	Energy Audit and Management	Electrical Engineering
2	OE3431	Data Science	Computer Science & Engineering (Artificial Intelligence and Machine Learning)
3	OE3105	Network Administration	Computer Science and Engineering
4	OE3065	Environmental Impact Assessment	Civil Engineering
5	OE3382	Disaster Management	Civil Engineering
6	OE3651	Distributed Systems	Computer Science and Information Technology
7	OE3611	Object Oriented Modeling and Design	Computer Science and Information Technology
8	OE3471	New Product Design & Development	Mechanical Engineering
9	OE3491	Non-Conventional Energy Sources	Mechanical Engineering
10	OE3045	Renewable Energy Sources	Robotics & Automation
11	OE3631	Robotics Engineering & Applications	Robotics & Automation
12	OE3531	Factory Automation	Mechatronics Engineering
13	OE3551	Cyber Physical System	Mechatronics Engineering
16	OE3571	Internet of Things	Electronics & Telecommunication Engineering
17	OE3591	Drone Technology	Electronics & Telecommunication Engineering
18	OE3511	Hydrogen Fuel Cell Technology	Mechanical Engineering



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Class: T. Y. B. Tech

Semester: VI

		Teaching Scheme						Evaluation Scheme					
Course Code	Course	L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (%Marks)		Practical (%Marks)		
									Max	Min. for passing	Max	Min. for passing	
EE322	Power System Protection	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
EE3045	Power Electronics	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
EE3161	Research Methodology	2	-	-	36	60	2	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
	Program Elective-II	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
	Open Elective-II	3	-	-	54	90	3	ISE	20	40	40	---	---
								UT1	15			---	---
								UT2	15			---	---
								ESE	50			---	---
	Online Course-V	-	-	-	90	90	3	ISE	100	50		---	-
SH3066	Scholastic Aptitude-II	2*					Audit	ISE	100	50 (P/NP)	--	--	--
EE3545	Power Electronics Lab	-	-	2	6	30	1	ISE	--	--		50	50
								ESE	--	--		50	50
EE3601	Automation and Control Lab	-	-	2	6	30	1	ISE	---	--		100	50
EE3641	Power System Protection Lab	-	-	2	6	30	1	ISE	--	--		50	50
								ESE	--	--		50	50
EE3661	Minor Project	-	-	12	36	180	6	ISE	--	---		50	50
								ESE	--	--		50	50
	TOTAL	14+2* = 16*	-	18	396	780	26						
	TOTAL CONTACT HOURS	34*											

ISE: In Semester Evaluation, UT-I: Unit Test-I, UT-II: Unit Test-II, ESE: End Semester Exam, P = Pass, NP = Not Pass, TW: Term Work, SL: Self Learning

Total Contact Hours/week : 34*
Total Credits : 26

Note*: Students should complete 5 days (30 Hours) of Scholastic Aptitude training program organized by the Institute.





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Students may opt for an Online course-V approved by the Departmental Program Committee (DPC).

Guidelines for Online Courses-V:

1. The course must be offered through an online MOOC platform such as NPTEL, Udemy, Coursera, NASSCOM, etc.
2. The minimum duration of the course should be 25-30 hours. For NPTEL courses, the duration should be at least 8 to 12 weeks.
3. If the duration of an online course is less than the prescribed duration mentioned above, the DPC will assign additional tasks to compensate for the shortfall in contact hours.
4. The evaluation shall be carried out as per the guidelines prescribed by the Departmental Program Committee (DPC).

Program Elective – II

Sr. No.	Course Code	Discipline	Course
1	EE3065	Power and Energy Systems	Electrical Energy Conservation and Auditing
2	EE3181		Battery Management Systems
3	EE3105	Drives and Control	Advanced Control Systems
4	EE3125		Application of Microcontrollers in Electrical Engineering



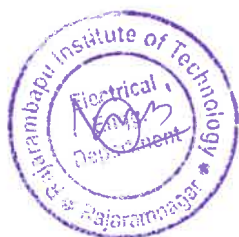


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Open Elective II			
Sr. No.	Course Code	Open Elective Subject Name	Offered by the department
1	OE3721	Industrial Safety	Electrical Engineering
2	OE3421	Data Mining	Computer Science & Engineering (Artificial Intelligence and Machine Learning)
3	OE3681	AI for Agriculture	Computer Science & Engineering (Artificial Intelligence and Machine Learning)
4	OE3481	Information Technology Foundation Program	Computer Science and Engineering
5	OE3661	AI for Cybersecurity	Computer Science and Engineering
6	OE3085	Materials Management	Civil Engineering
7	OE3501	Operations Research	Civil Engineering
8	OE3581	Plumbing (Water and Sanitation)	Civil Engineering
9	OE3402	Cyber Security	Computer Science and Information Technology
10	OE3641	AI for Manufacturing	Computer Science and Information Technology
11	OE3285	Supply Chain Management	Mechanical Engineering
12	OE3325	Entrepreneurship Development	Mechanical Engineering
13	OE3025	Reliability Engineering	Robotics & Automation
14	OE3621	Flexible Manufacturing System	Robotics & Automation
15	OE3521	Image Processing	Electronics & Telecommunication Engineering
16	OE3541	Fuzzy Logic & Neural Network	Electronics & Telecommunication Engineering
17	OE3701	AI for Sustainability	Electronics & Telecommunication Engineering
18	OE3441	Supply Chain Analytics	Mechatronics Engineering
19	OE3461	Mobile Robotics	Mechatronics Engineering
20	OE3561	Project Management	Mechanical Engineering
21	OE3243	Marketing for Engineers	MBA





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Class: Final Year B. Tech

Semester: VII

Course Code	Course	Teaching Scheme						Evaluation Scheme					
		L	T	P	TW-SL	Total Hr	Credits	Scheme	Theory (%Marks)		Practical (%Marks)		
									Max.	Min. for passing	Max.	Min. for passing	
EE4111	Solar and Wind Energy Systems	2	-	-	36	60	2	ISE	20	40	40	---	---
								MSE	30			---	---
								ESE	50			---	---
EE4131	Electrical Vehicle	3	-	-	54	90	3	ISE	20	40	40	---	---
								MSE	30			---	---
								ESE	50			---	---
EE4035	Electrical Drives	3	-	-	54	90	3	ISE	20	40	40	---	---
								MSE	30			---	---
								ESE	50			---	---
EE4191	Control System Design	3	-	-	54	90	3	ISE	20	40	40	---	---
								MSE	30			---	---
								ESE	50			---	---
	Program Elective-III	3	-	-	54	90	3	ISE	20	40	40	---	---
								MSE	30			---	---
								ESE	50			---	---
	Program Elective-IV	3	-	-	54	90	3	ISE	20	40	40	---	---
								MSE	30			---	---
								ESE	50			---	---
	Program Elective-IV Lab	-	-	2	6	30	1	ISE	--	---	---	100	50
EE4731	Solar and Wind Energy Systems Lab	-	-	2	6	30	1	ISE	--	---	---	100	50
EE4751	Electrical Vehicle and Drives Lab	-	-	2	6	30	1	ISE	--	---	---	50	50
								ESE	--	---	---	50	50
	TOTAL	17	-	6	324	600	20						
	TOTAL CONTACT HOURS	23											

ISE: In Semester Evaluation, MSE: Mid Semester Examination, ESE = End Semester Exam, TW: Term Work, SL: Self Learning

Total Contact Hours/week : 23
Total Credits : 20





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Program Elective-III

Sr. No.	Course Code	Discipline	Course
1	EE4055	Power and Energy Systems	Power System Dynamics and Control
2	EE4075		HVDC Transmission Systems
3	EE4095	Drives and Control	Nonlinear Control Systems
4	EE4291		Power System Operation and Control

Program Elective-IV Theory

Sr. No.	Course Code	Discipline	Course
1	EE4135	Power and Energy Systems	High Voltage Engineering
2	EE4155		Power Quality and Harmonics
3	EE4115	Drives and Control	FACTS Controllers
4	EE4175		Smart Grids

Program Elective-IV Lab

Sr. No.	Course Code	Discipline	Course
1	EE4651	Power and Energy Systems	High Voltage Engineering Lab
2	EE4671		Power Quality and Harmonics Lab
3	EE4691	Drives and Control	FACTS Controllers Lab
4	EE4711		Smart Grids Lab





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Choice based Internship Model
Model I: Industry Internship (II)

Class: Final Year B. Tech

Semester: VIII

Course Code	Course	Teaching Scheme						Evaluation Scheme					
		L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (%Marks)			Practical (%Marks)	
									Max.	Min. for passing		Max.	Min. for passing
OE4383	Finance for Engineers (Online Course)	2	-	-	36	60	2	ISE	25	40	40	---	---
								ESE	75	40		---	---
OE4363	Engineering Management & Economics (Online Course)	2	-	-	36	60	2	ISE	25	40	40	---	---
								ESE	75	40		---	---
IP4025	Industry Internship & Project	-	-	-	360	360	12	ISE	---	----		50	50
								ESE	---	---		50	50
	TOTAL	-	-	-	432	480	16						

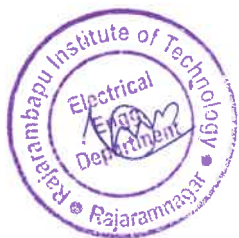
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Total Contact Hours/week : --
Total Credits : 16

Note:

- Weekly Contact hours are not mentioned as student is expected to be in industry regularly for 20 weeks. However, student needs to report to Institute mentors as and when required.
- For online course, lecture videos of each unit will be made available through college platform to the students. For each unit there will be separate assignment. Students need to submit all assignments within specified time.

Weightage: 25% weightage for unit wise assignments + 75% weightage for final exam. Final exam will be held at college campus.





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Twinning Program

Curriculum Structure and Evaluation Scheme
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 Department of Electrical Engineering

Rev: EE Course Twinning Structure/RIT/01/2025-29 & 2026-30

Model II: Research Internship (RI)

Class: Final Year B. Tech

Semester: VIII

Course Code	Course	Teaching Scheme						Evaluation Scheme					
		L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (%Marks)			Practical (%Marks)	
									Max.	Min. for passing		Max.	Min. for passing
OE4383	Finance for Engineers (Online Course)	2	-	-	36	60	2	ISE	25	40	40	---	---
								ESE	75	40		---	---
OE4363	Engineering Management & Economics (Online Course)	2	-	-	36	60	2	ISE	25	40	40	---	---
								ESE	75	40		---	---
RE4045	Research Internship	-	-	-	360	360	12	ISE	---	----		50	50
								ESE	---	---		50	50
	TOTAL	-	-	-	432	480	16						

ISE: In Semester Evaluation, UT-I: Unit Test-I, UT-II: Unit Test-II, ESE: End Semester Exam, TW: Term Work, SL: Self Learning

Total Contact Hours/week : -
Total Credits : 16

Note:

- 1] Weekly Contact hours are not mentioned as student is expected to be in outside research organization regularly for 20 weeks. However, student needs to report to Institute mentors as and when required.
- 2] For online course, lecture videos of each unit will be made available through college platform to the students. For each unit there will be separate assignment. Students need to submit all assignments within specified time.
- 3] Students who opt for a research internship need to undergo a minimum of one month of research internship in outside research organizations or laboratories.

Weightage: 25% weightage for unit wise assignments + 75% weightage for final exam. Final exam will be held at college campus.





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Model III: Entrepreneurial Internship (EI)

Class: Final Year B. Tech

Semester: VIII

Course Code	Course	Teaching Scheme						Evaluation Scheme					
		L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (%Marks)			Practical (%Marks)	
									Max	Min. for passing		Max	Min. for passing
ED4105	Project Management (Online Course)	2	-	-	36	60	2	ISE	25	40	40	-	-
								ESE	75	40		-	-
ED4045	Commercial Aspects of the Project (Online Course)	2	-	-	36	60	2	ISE	25	40	40	-	-
								ESE	75	40		-	-
ED4065	Entrepreneurship Development Program (EDP)	-	-	-	30	30	1	ISE	--	--	--	100	50
ED4085	Entrepreneurial Internship	-	-	-	330	330	11	ISE	---	--	--	50	50
								ESE				50	
	Total	-	-	-	432	480	16						

ISE: In Semester Evaluation, UT-I: Unit Test-I, UT-II: Unit Test-II, ESE: End Semester Exam, TW: Term Work, SL: Self Learning

Total Contact Hours/week : -

Total Credits : 16

Note:

1] Weekly Contact hours are not mentioned as student is expected to be in outside research organization regularly for 20 weeks. However, student needs to report to Institute mentors as and when required.

2] For online course, lecture videos of each unit will be made available through college platform to the students. For each unit there will be separate assignment. Students need to submit all assignments within specified time.

Weightage: 25% weightage for unit wise assignments + 75% weightage for final exam. Final exam will be held at college campus.

3] A one week Entrepreneurship Development Program (EDP) will be conducted after completion of 7th semester and before start of 8th semester.

4] Students who opt for an entrepreneurial internship need to undergo a one-month internship at an outside reputed organization or firm





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Multidisciplinary Minor

- Under the Multidisciplinary Minor (MDM), each department shall propose a basket of online courses for Online Course-I to V. The proposed courses shall be reviewed and approved by the respective Departmental Program Committee (DPC).
- The respective DPC shall ensure the availability of an appropriate basket of courses under each Online Course category. These approved course baskets shall be floated to the concerned departmental students.
- Students shall opt for the course of their choice based on the availability of courses on the designated online learning platform with the approval of DPC.
- The basket of MDM courses offered by the Department of Mechanical Engineering, along with the respective semesters in which they are offered, is presented in the following table.

Name of the Department	MDM Basket Name	Semester	Course Name	Course Code	MDM Course
Electrical Engineering	Electrical Power System	III	Online Course I	EEMD207	The Ultimate Electric Circuits for Electrical Engineering
				EEMD205	Fundamentals of Electrical Engineering
		IV	Online Course II	EEMD208	Complete Solar Energy PV Design Course From Zero To Hero
				EEMD206	Complete Renewable Energy: Solar, Wind, Hydrogen, & Battery
		V	Online Course III	EEMD307	Introduction to battery-management systems
				EEMD309	Equivalent Circuit Cell Model Simulation
		V	Online Course IV	EEMD311	Battery State-of-Charge (SOC) Estimation
				EEMD313	Battery State-of-Health (SOH) Estimation
		VI	Online Course V	EEMD304	Electric Vehicles Specialization
				EEMD306	Electric Vehicle Systems and Technologies Specialization





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B.Tech. in Electrical Engineering with Double Minor (Multidisciplinary and Specialization Minor)





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B.Tech. in Electrical Engineering with Double Minor degree

1. It is required to complete SIX courses (each of 3 credits) from ONLINE platform to earn total of 18 credits under Double Minor (DM) certification.
2. Student must complete and earn the credits for all the six courses starting from Second Year First semester (3rd semester) to Final Year Second Semester (8th semester).
3. Basket of the DM courses and respective semester is mentioned in the following table.

Sr. No.	Semester	Course	Code
1	III	DM – I	EEDM3XXX
2	IV	DM – II	EEDM4XXX
3	V	DM – III	EEDM5XXX
4	VI	DM – IV	EEDM6XXX
5	VII	DM – V	EEDM7XXX
6	VIII	DM – VI	EEDM8XXX

4. To select course platform, first preference must be given to NPTEL.
5. Other than NPTEL, courses from COURSERA and UDEMY platforms are allowed to register only in following cases,
 - a. If timeline of NPTEL course is not in line with timeline of academic calendar.
 - b. The suitable succeeding course in line with previous course is not available on NPTEL.
 - c. If any other unavoidable circumstances occurs.
6. Platform and course selection must be as per recommendation of BOS of the department.
7. Student will get the credits of respective DM course in following conditions,
 - a. In case of course selected from NPTEL platform, student have to complete the timely assignments, PASS the exam and secure the certificate.
 - b. In case of course selected from COURSERA or UDEMY, student have to secure the certificate and appear for VIVA(oral) exam.
8. While selecting online course, following points must be taken care of,
 - a. Selected course must be of basic or fundamental level.
 - b. Contents of the course should not be covered in any of the course offered in regular curriculum or not listed in any elective (open or program elective) or in Multidisciplinary Minor (MDM)
 - c. Duration of each online course must be of EIGHT weeks for NPTEL and 30+ hours for UDEMY, COURSERA courses.



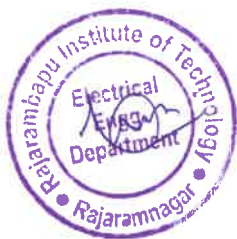


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B.Tech. in Electrical Engineering with Honor and Multidisciplinary Minor





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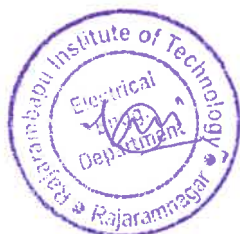
Rev: EE Course Twinning Structure/RIT/01/2025-29 & 2026-30

B.Tech. in Electrical Engineering with Honor and Multidisciplinary
Minor degree

1. It is required to complete SIX courses (each of 3 credits) from ONLINE platform to earn total of 18 credits under Honor certification.
2. Student must complete and earn the credits for all the six courses starting from Second Year First semester (3rd semester) to Final Year Second Semester (8th semester).
3. Basket of the Honor courses and respective semester is mentioned in the following table.

Sr. No.	Semester	Course	Code
1	III	Honor - I	EEH3XXX
2	IV	Honor - II	EEH4XXX
3	V	Honor - III	EEH5XXX
4	VI	Honor - IV	EEH6XXX
5	VII	Honor - V	EEH7XXX
6	VIII	Honor - VI	EEH8XXX

4. To select course platform, first preference must be given to NPTEL.
5. Other than NPTEL, courses from COURSERA and UDEMY platforms are allowed to register only in following cases,
 - a. If timeline of NPTEL course is not in line with timeline of academic calendar.
 - b. The suitable succeeding course in line with previous course is not available on NPTEL.
 - c. If any other unavoidable circumstances occurs.
6. Platform and course selection must be as per recommendation of BOS.
7. Student will get the credits of respective Honor course in following conditions,
 - a. In case of course selected from NPTEL platform, student have to complete the timely assignments, PASS the exam and secure the certificate.
 - b. In case of course selected from COURSERA or UDEMY, student have to secure the certificate and appear for VIVA (oral) exam.
8. While selecting online course, following points must be taken care of,
 - a. Selected course must be of advanced level and not basic or fundamental level.
 - b. Contents of the course should not be covered in any of the course offered in regular curriculum or not listed in any elective (open or program elective)
 - c. Duration of each online course must be of EIGHT weeks for NPTEL and 30+ hours for COURSERA, UDEMY courses.





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B.Tech. in Electrical Engineering-Honors with Research and Multidisciplinary Minor



Twinning Program

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Honors with Research and Multidisciplinary Minor

The student will work on Research Project or Dissertation for 18 Credits in the Fourth Year in respective discipline. The distribution of 18 Credits for Research project in Sem-VII and Sem-VIII is given below. To get B.Tech. in Electrical Engineering-Honors with Research and Multidisciplinary Minor degree Student need to earn total 188 Credits which consist 169 credits of regular Multidisciplinary Minor courses and 18 credits of Research courses.

Class: Final Year B. Tech

Semester: VII

		Teaching Scheme						Evaluation Scheme					
Course Code	Course	L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (Marks %)			Practical (Marks %)	
									Max.	Min. for passing		Max.	Min. for passing
REH4011	Intellectual Property Rights	-	-	-	60	60	2	ISE	50	40	40	---	---
								ESE	50	40		---	---
REH4031	Research project (Synopsis) phase - I	-	-	-	60	60	2	ISE	--	--	--	50	50
								ESE	--	--		50	50
REH4051	Research Specific core course - I (Online NPTEL course)	-	-	-	90	90	3	ISE	50	40	40	--	--
								ESE	50	40		--	--
	TOTAL	-	-	-	210	210	7						

ISE: In Semester Evaluation, UT-I: Unit Test-I, UT-II: Unit Test-II, ESE: End Semester Exam, TW: Term Work, SL: Self Learning

Note: For Evaluation of Online NPTEL course ISE Marks will be marks obtained by students in the assignments given by NPTEL, students who will secure NPTEL certification will be only eligible for ESE of the same course which will be conducted at institute

Class: Final Year B. Tech

Semester: VIII

Course Code	Course	Teaching Scheme						Evaluation Scheme					
		L	T	P	TW-SL	Total Hr.	Credits	Scheme	Theory (Marks %)			Practical (Marks %)	
									Max.	Min. for passing		Max.	Min. for passing
REH4021	Research project phase - II	-	-	-	330	330	11	ISE	--	--	--	50	50
								ESE	--	--		50	
	TOTAL	-	-	-	330	330	11						

ISE: In Semester Evaluation, UT-I: Unit Test-I, UT-II: Unit Test-II, ESE: End Semester Exam, TW: Term Work, SL: Self Learning

