

Department of Electrical Engineering

Overview

Department of **Electrical Engineering** is one of the major departments under School of Engineering & Technology, D Y Patil Agriculture & Technical University, Talsande established in year 2021.

It offers full time 4 year degree programme for Bachelor of Technology in **Electrical Engineering**. This department is equipped with broad background of Theoretical and Practical Knowledge using laboratories, instruments, equipments, classrooms, seminar halls and hands-on practical training to develop the youth technically strong in the field of **Electrical Engineering**.

Department covers the courses related with Generation, Transmission, Distribution and Utilization of Electrical Energy.. Department also focus on new trends in **Electric Vehicle**, Automation and offering new online courses.

Department took special efforts to generate graduate who serves job in public and private sector as well as setting up a small business.

Department/Course Highlights

- Well equipped Laboratories
- The courses are structured in ways that encourage analytical thinking, help master time management and ensure students are technically proficient.
- Dynamic & expert faculty well qualified to impart high quality teaching in conventional areas of Electrical **Engineering**.
- Problem based project work on latest trends.
- Educational based Field visits, workshops, guest lecturers, Extensive hands on training for the overall development of the students.
- Strong linkage between academic and industry
- Strong community outreach through organization of workshops for cross-section of society.
- Soft skill & personality development courses to grab job opportunities in private and government sector/ industries.
- Develop research based Activity and online value added courses.
- Internship in industries during the course.

D. Y. PATIL AGRICULTURE AND TECHNICAL UNIVERSITY, TALSANDE, KOLHAPUR
SCHOOL OF ENGINEERING AND TECHNOLOGY
SCHEME OF TEACHING AND EXAMINATION
FIRST YEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING)
SEMESTER- I (Chemistry Group)

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Applied Mathematics-I	3	-	-	03	100
2			Applied Chemistry	3	-	-	03	100
3			Computer Programming in C	3	-	-	03	100
4			Engineering Mechanics	3	-	-	03	100
5			Fundamental of electronics and Electrical	3	-	-	03	100
6			Social Innovation	-	1	2	02	50
7			Applied Mathematics-I	-	1	-	01	25
8			Applied Chemistry Lab	-	-	2	01	25
9			Computer Programming in C Lab	-	-	2	01	25
10			Engineering Mechanics Lab	-	-	2	01	25
11			Fundamental of electronics and Electrical Lab	-	-	2	01	25
12			Workshop Practice Lab-I	-	-	2	01	50
13			Foreign language (German/Japanese/Russian) (Non Credit)	1	-	-	-	100
14			Democracy, Election & Good Governance (Non Credit Mandatory Course)*					
			Total	16	2	12	23	825

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) SEE will be conducted for 100 marks and converted to 50 marks.

CSE: Continuous Semester Evaluation

SEE: Semester End Evaluation

IPE: Internal Practical Evaluation

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FIRST YEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING)
SEMESTER- I(Physics Group)

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Applied Mathematics-II	3	-	-	03	100
2			Applied Physics	3	-	-	03	100
3			Object oriented Programming	3	-	-	03	100
4			Engineering Drawing	2	-	-	02	100
5			Engineering Exploration	-	-	4	02	100
6			Professional Communication	2	-	-	02	100
7			Applied Mathematics-II	-	1	-	01	25
8			Applied Physics Lab	-	-	2	01	25
9			Object oriented Programming Lab	-	-	2	01	25
10			Engineering Drawing Lab	-	-	4	02	25
11			Professional; Communications Lab	-	-	2	01	25
12			Workshop Practice Lab-II	-	-	2	01	50
			Total	13	1	16	22	775

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FIRST YEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING)
SEMESTER- II (Physics Group)

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Applied Mathematics-I	3	-	-	03	100
2			Applied Physics	3	-	-	03	100
3			Computer Programming in C	3	-	-	03	100
4			Engineering Drawing	3	-	-	03	100
6			Social Innovation	-	1	2	02	50
			Professional Communication	2			02	100
7			Applied Mathematics-I	-	1	-	01	25
8			Applied Physics Lab	-	-	2	01	25
9			Computer Programming in C Lab	-	-	2	01	25
10			Engineering Drawing Lab	-	-	4	02	25
11			Professional Communication Lab	-	-	2	01	25
12			Workshop Practice Lab-I	-	-	2	01	50
13			Foreign language (German/Japanese/Russian) (Non Credit)	1	-	-	-	100
14			Democracy, Election & Good Governance (Non Credit Mandatory Course)*					
			Total	14	2	14	22	825

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SEMESTER- II (Chemistry Group)

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Applied Mathematics-II	3	-	-	03	100
2			Applied Chemistry	3	-	-	03	100
3			Object oriented Programming	3	-	-	03	100
4			Engineering Mechanics	2	-	-	02	100
5			Engineering Exploration	-	-	4	02	100
6			Fundamental of Electronics and Electrical	3	-	-	03	100
7			Applied Mathematics-II	-	1	-	01	25
8			Applied Chemistry Lab	-	-	2	01	25
9			Object oriented Programming Lab	-	-	2	01	25
10			Engineering Mechanics Lab	-	-	2	01	25
11			Fundamental of Electronics and ElectricalLab	-	-	2	01	25
12			Workshop Practice Lab-II	-	-	2	01	50
			Total	15	1	14	23	775

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SECOND YEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING) SEMESTER- III

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Engineering Mathematics III	3	1		4	100
2			Electrical Circuit Analysis	3	1		4	100
3			Analog and Digital Electronics	3			3	100
4			Electrical Material	3			3	100
5			Electrical Measurement and Instrumentation	3			3	100
6			Electrical Circuit Analysis-Lab			2	1	50
7			Analog and Digital Electronics-Lab			2	1	50
8			Electrical Measurement and Instrumentation-Lab			2	1	50
9			Matlab-Lab			4	2	50
			Total	15	2	10	22	700
10			*Environmental Studies	2	-	-	-	50
11			Indian Traditional Knowledge		-	-	-	NC
				27Hrs/Week				

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) SEE will be conducted for 100 marks and converted to 50 marks.

3) *Environmental Studies project evaluation and theory examination will be conducted at the end of the year (along with Sem IV end examination)

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SECOND YEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING) SEMESTER- IV

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Advanced Microcontroller and Application	3			3	100
2			Electrical Machines-I	3			3	100
3			Power System-I	3			3	100
4			Signal And System	3			3	100
5			Renewable Energy Sources	3			3	100
6			Advanced Microcontroller and Application-Lab			2	1	50
7			Electrical Machine-I-Lab			2	1	50
8			Power System-I-Lab			2	1	50
9			Auto CAD-Lab			4	2	50
10								
			Total	17	-	10	21	700
11			*Environmental Studies	2	-	-	-	50
12			intellectual Property Rights	-	-	-	-	NC
				27Hrs/Week				

Note: 1) Tutorials & practical shall be conducted in batches with batch strength not exceeding 20 students.

2) SEE will be conducted for 100 marks and converted to 50 marks.

3) * Environmental Studies project evaluation & theory examination will be conducted at the end of the year (along with Sem IV end examination)

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SCHEME OF TEACHING AND EXAMINATION
THIRD YEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING) SEMESTER- V

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Power System-II	3			3	100
2			Electrical Machines-II	3			3	100
3			Control System-I	3			3	100
4			Power Electronics	3			3	100
5			Energy Conservation And Audit	3			3	100
6			Electrical Machines-II-Lab			2	1	50
7			Control System-I-Lab			2	1	50
8			Power Electronics-Lab			2	1	25
9			Energy Conservation And Audit-Lab			2	1	25
10			Technical Value Added Courses				2	25
			Total	15	-	10	22	700
				25Hrs/Week				

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THIRD YEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING) SEMESTER- VI

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Control System-II	3			3	100
2			Electrical Installation,Maintanance and Testing	3			3	100
3			Professional Elective I	3			3	100
4			Power System Operation And Control	3			3	100
5			Electrical Estimation and Costing	3	1		4	100
6			Control System-II-Lab			2	1	50
7			Electrical Installation,Maintanance and Testing-Lab			2	1	25
8			Professional Elective I-Lab			2	1	25
9			Power System Operation And Control-Lab			2	1	50
10			In Plant Training			2	1	50
11			Law of Engineering	2			1	
			Total	17	1	8	23	700
				26 Hrs/Week				

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Elective I :1- Utilization of electrical energy2-Power quality and Harmonics

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FINAL YEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING) SEMESTER- VII

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Advanced Switchgear And Protection	3			3	100
2			Smart Grid	3			3	100
3			Professional Elective-II	3			3	100
4			Open Elective-I	3			3	100
5			Advanced Switchgear And Protection-Lab			2	1	50
6			Smart Grid-Lab			2	1	25
7			Professional Elective-I-Lab			2	1	50
8			Open Elective-I-Lab		2		1	25
9			Project Phase -I			4	2	100
10			Mini Project/Seminar				2	
11			Research Methodology	2			1	
				14	2	10	21	700
12			Non technical value added courses(NSS,NCC,Swayam)				NC	
				26 Hrs/Week				

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Professional Elective-II :1.Special Purpose Machine2.Digital Signal Processing3.PLC and SCADA Application

Open Elective I :1.EHVAC Transmission

2. Restructuring and Deregulation

3.Flexible AC Transmission System

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FINALYEAR B. TECH. (DEPARTMENT OF ELECTRICAL ENGINEERING)SEMESTER- VIII

Sr. No.	Course Code	Corse Type	Name of Course	Teaching Scheme per week				Total Marks
				L	T	P	Credits	
1			Power Electronics Control and Drives	3			3	100
2			High Voltage DC System	3			3	100
3			Professional Elective-III					
4			Open Elective-II	3			3	100
5			Power Electronics Control and Drives-LAB			2	1	25
6			High Voltage DC System-LAB			2	1	25
7			Professional Elective-III-Lab			2	1	25
8			Open Elective-II-Lab			2	1	25
9			Project Phase -II			2	3	200
			TOTAL	20	-	10	19	700
10			SoftSkill(Technical writing, team building)				NC	
				30 Hrs/Week				

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Professional Elective-III - 1.Electromagnetic Field2. Illumination Engineering

3.Robotics And Automation

Open Elective II- 1.Design of Electric Machine

2.Advance Relaying

3.Electric And Hybrid Vehicle