

Study & Evaluation Scheme

of

Diploma in Engineering
(ELECTRICAL ENGINEERING)
[Applicable w.e.f. Academic Session 2024-25]
Approved by Academic Council



FUTURE UNIVERSITY

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FUTURE UNIVERSITY

(Established under Govt. of U. P. Act No. 12, 2024)

Study & Evaluation Scheme of Diploma in Engineering (ELECTRICAL ENGINEERING) SUMMARY

Programme : Diploma in Engineering (ELECTRICAL ENGINEERING)

Duration : Three years full time (Six Semesters)

Medium : English/ Hindi

Minimum Required Attendance : 75 percent

Credit

Maximum Credit : 132

Minimum credit required for the degree : 120

Assessment (Theory)	:	<table><tr><th>Internal</th><th>External</th><th>Total</th></tr><tr><td>30%</td><td>70%</td><td>100%</td></tr></table>	Internal	External	Total	30%	70%	100%
Internal	External	Total						
30%	70%	100%						

Assessment (Practical)	:	<table><tr><th>Internal</th><th>External</th><th>Total</th></tr><tr><td>30%</td><td>70%</td><td>100%</td></tr></table>	Internal	External	Total	30%	70%	100%
Internal	External	Total						
30%	70%	100%						

Internal Evaluation (Theory Papers)	Class Test I	Class Test II	Assignment(s)	Other Activity (including attendance)	Total
	10 Marks	10 Marks	5 Marks	5 Marks	30 Marks

Internal Evaluation (Practical Papers)	Experiment File Viva	Mid Semest er Exam	Attendance	Total
	10 Marks	10 Marks	10 Marks	30 Marks

Duration of Examination (Theory)	:	External	Internal
		3 hrs.	1 ½ hrs

Duration of Examination (Practical) : As per the requirement of the practical paper.

To qualify the course a student is required to secure a minimum of 40% marks in aggregate including the semester end examination and teachers' continuous evaluation. (i.e. both internal and external).

A candidate who secures less than of 40% of marks in a course shall be deemed to have failed in that course. The student should have at least 50% marks in aggregate to clear the semester. In case a student has more than 40% in each course, but less than 50% overall in a semester, he/she shall re-appear in courses where the marks are less than 50% to achieve the required aggregate percentage of 50% in the semester.

Question Paper Structure

- 1. The question paper shall consist of six questions. Out of which first question shall be of short answer type (not exceeding 50 words) and will be compulsory. Question No. 1 shall contain 8 parts representing all units of the syllabus and students shall have to answer any five (weight age 4 marks each).***
- 2. Out of the rest five questions, students shall be required to attempt all five questions, but there will be an internal choice of A or B. Each question will be from one unit of the syllabus. The weight age of Question No. 2 to 6 shall be 10 marks each.***

Faculty of Engineering & Technology

Department of Diploma in Engineering

Electrical Engineering

Evaluation Scheme

Credit Framework for Diploma in Engineering - NEP-2020									
Sem.	Major (Core)	Minor Stream	Multidisciplinary	Ability Enhancement course	Skill Enhancement Course	Value added Courses Common for All Diploma	Summer Internship	Research Project/Dissertation	Total Credit
1.	14	5			3	2			24
2.	17	4	2			1			24
3.	10	4	2		5	1			22
4.	14			3		3	2		22
5.	13		3	3		1			20
6.	17					1		2	20

Total Credit- 132

Polytechnic (Diploma in Engineering), Semester I

							Evaluation Scheme					
SN	Subject Name	Type	Category	Period			Sessional Component		Sessional (SW) (TS/PS)	End Semester Examination (ESE)	Total	Credit
				L	T	P	CT	TA	CT+TA	TE/PE	SW+ESE	Cr
1.	Mathematics-I	T	Major (Core)	3	1	-	20	10	30	70	100	4
2.	Applied Physics-I	T	Major (Core)	3	1	-	20	10	30	70	100	4
3.	Applied Chemistry	T	Major (Core)	3	1	-	20	10	30	70	100	4
4.	Communication Skills in English	T	Skill Enhancement	3	-	-	20	10	30	70	100	3
5.	Applied Physics Lab	P	Minor Stream	-	-	4	-	20	20	30	50	2
6.	Applied Chemistry Lab	P	Minor Stream	-	-	2	-	20	20	30	50	1
7.	Communication Skills Lab	P	Minor Stream	-	-	2	-	20	20	30	50	1
8.	Engineering Graphics	P	Major (Core)	-	-	4	-	20	20	30	50	2
9.	Engineering Workshop Practice Lab	P	Minor Stream	-	-	2	-	20	20	30	50	1
10.	General Proficiency	-	Value Added	-	-	2	-	50	50	-	50	1
11.	Sports & Yoga	-	Value Added	-	-	2	-	20	20	30	50	1
	Total			12	3	18	80	210	290	460	750	24

Polytechnic (Diploma in Engineering), Semester II

							Evaluation Scheme					
SN	Subject Name	Type	Category	Period			Sessional Component		Sessional (SW) (TS/PS)	End Semester Examination (ESE)	Total	Credit
				L	T	P	CT	TA	CT+TA	TE/PE	SW+ESE	Cr
1.	Mathematics-II	T	Major (Core)	3	1	-	20	10	30	70	100	4
2.	Applied Physics-II	T	Major (Core)	3	1	-	20	10	30	70	100	4
3.	Introduction to IT System	T	Major (Core)	2	-	-	20	10	30	70	100	2
4.	Fundamentals of Electrical & Electronic Engineering	T	Major (Core)	2	1	-	20	10	30	70	100	3
5.	Engineering Mechanics	T	Major (Core)	3	1	-	20	10	30	70	100	4
6.	Environmental Sciences	T	Multidisciplinary	2	-	-	20	10	30	70	100	2
7.	Applied Physics-II Lab	P	Minor Stream	-	-	2	-	20	20	30	50	1
8.	Introduction to IT System Lab	P	Minor Stream	-	-	2	-	20	20	30	50	1
9.	Fundamentals of Electrical Electronic Engineering Lab	P	Minor Stream	-	-	2	-	20	20	30	50	1
10.	Engineering Mechanics Lab	P	Minor Stream	-	-	2	-	20	20	30	50	1
11.	General Proficiency	-	Value Added	-	-	2	-	50	50	-	50	1
	Total			15	4	10	120	190	310	540	850	24

Polytechnic (Diploma in Engineering), Semester III

							Evaluation Scheme					
SN	Subject Name	Type	Category	Period			Sessional Component		Sessional (SW) (TS/PS)	End Semester Examination (ESE)	Total	Credit
				L	T	P	CT	TA	CT+T A	TE/PE	SW+ESE	Cr
1.	Applied Mathematics-III	T	Minor Stream	3	1	-	20	10	30	70	100	4
2.	Communication Skill-II	T	Skill Enhancement	3	-	-	20	10	30	70	100	3
3.	AI For Everyone	T	Skill Enhancement	2	-	-	20	10	30	70	100	2
4.	Electrical Instrumentation and Measurement	T	Major (Core)	3	1	-	20	10	30	70	100	4
5.	Electrical Machine-I	T	Major (Core)	3	1	-	20	10	30	70	100	4
6.	Environmental Studies	T	Multidisciplinary	2	-	-	20	10	30	70	100	2
7.	Electrical Instrumentation LAB	P	Major (Core)	-	-	2	-	20	20	30	50	1
8.	Electrical Machine-1 LAB	P	Major (Core)	-	-	2	-	20	20	30	50	1
9.	General Proficiency	-	Value Added	-	-	2	-	50	50	-	50	1
		Total		16	3	6	120	150	270	480	750	22

Polytechnic (Diploma in Engineering), Semester IV

							Evaluation Scheme					
SN	SubjectName	Type	Category	Period			Sessional Component		Sessional (SW) (TS/PS)	End Semester Examination (ESE)	Total	Credit
				L	T	P	CT	TA	CT+TA	TE/PE	SW+ESE	Cr
1.	Industrial Training	-	Summer Training	-	-	-	-	50	50	-	50	2
2.	Industrial Electronics and Control	T	Major (Core)	2	1	-	20	10	30	70	100	3
3.	Electrical Design, Drawing and Estimating-I	T	Major (Core)	2	1	-	20	10	30	70	100	3
4.	Transmission and Distribution of Electrical Power	T	Major (Core)	2	1	-	20	10	30	70	100	3
5.	Energy Conservation	T	Ability Enhancement	3	-	-	20	10	30	70	100	3
6.	AI for Engineering	T	Major (Core)	3	-	-	20	10	30	70	100	3
7.	Universal Human Values	T	Value Added	2	-	-	20	10	30	70	100	2
8.	Electrical Design, Drawing and Estimating-II LAB	P	Major (Core)	-	-	2	-	20	20	30	50	1
9.	Transmission and Distribution of Electrical Power LAB	P	Major (Core)	-	-	2	-	20	20	30	50	1
10.	General Proficiency	-	Value Added	-	-	2	-	50	50	-	50	1
			Total	14	3	6	120	200	320	480	800	22

Polytechnic (Diploma in Engineering), Semester V

SN	SubjectName	Type	Category	Period			Evaluation Scheme					Credit
							Sessional Component		Sessional (SW) (TS/PS)	End Semester Examination (ESE)	Total	
				L	T	P	CT	TA	CT+TA	TE/PE	SW+ESE	Cr
1.	Switchgear and Protection	T	Major (Core)	2	1	-	20	10	30	70	100	3
2.	PLC, Microcontroller and SCADA	T	Major (Core)	2	1	-	20	10	30	70	100	3
3.	Electrical Machine-II	T	Major (Core)	2	1	-	20	10	30	70	100	3
4.	Renewable Source of Energy*	T	Ability Enhancement	3	-	-	20	10	30	70	100	3
5.	Power Plant Engineering	T	Major (Core)	2	-	-	20	10	30	70	100	2
6.	Industrial Management and Entrepreneurship Development	T	Multidisciplinary	3	-	-	20	10	30	70	100	3
7.	PLC, Microcontroller and SCADA LAB	P	Major (Core)	-	-	2	-	20	20	30	50	1
8.	Electrical Machine-II LAB	P	Major (Core)	-	-	2	-	20	20	30	50	1
9.	General Proficiency	-	Value Added	-	-	2	-	50	50	-	50	1
	Total			14	3	6	120	150	270	480	750	20

Note: - (*) – Elective Subject

Polytechnic (Diploma in Engineering), Semester VI

							Evaluation Scheme					
SN	Subject Name	Type	Category	Period			Sessional Component		Sessional (SW) (TS/PS)	End Semester Examination (ESE)	Total	Credit
				L	T	P	CT	TA	CT+TA	TE/PE	SW+ESE	Cr
1.	Installation, Maintenance and Repair of Electrical Equipment	T	Major (Core)	2	1	-	20	10	30	70	100	3
2.	Electrical Design, Drawing and Estimating II	T	Major (Core)	2	1	-	20	10	30	70	100	3
3.	Utilization of Electrical Energy	T	Major (Core)	2	-	-	20	10	30	70	100	2
4.	Application of computer software in Electrical Engineering	T	Major (Core)	2	-	-	20	10	30	70	100	2
5.	Digital Electronics	T	Major (Core)	2	-	-	20	10	30	70	100	2
6.	Electrical and Electronics Engineering Materials	T	Major (Core)	2	1	-	20	10	30	70	100	3
7.	Electrical Design, Drawing and Estimating II LAB	P	Major (Core)	-	-	2	-	20	20	30	50	1
8.	Installation, Maintenance and Repair of Electrical Equipment LAB	P	Major (Core)	-	-	2	-	20	20	30	50	1
9.	Project Work	p	Project	-	-	4	-	50	50	200	250	2
10.	General Proficiency	-	Vale Added	-	-	2	-	50	50	-	50	1
	Total			12	3	10	120	200	320	680	1000	20