STUDY AND EVALUATION SCHEME FOR LATERAL ENTRY AND ITI PASSES STUDENTS ELECTRICAL ENGINEERING

THIRD SEMESTER

Sr. No.	SUBJECTS	COURSE TYPE & CATEGORY	STUDY SCHEME Periods/Week			Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
							INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
			L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
3.1	BASICS OF POWER GENERATION SYSTEMS	PROGRAM CORE (THEORY)	03	-	-	3	40	-	40	60	3	-	-	60	100
3.2	ELECTRIC MACHINE- 1	PROGRAM CORE (THEORY)	04	-	-	4	40	-	40	60	3	-	-	60	100
3.3	ELECTRICAL CIRCUITS	PROGRAM CORE (PRACTICUM)	01	-	04	3	-	60	60	-	-	40	3	40	100
3.4	ELECTRICAL AND ELECTRONIC MEASUREMENTS	PROGRAM CORE (PRACTICUM)	02	-	04	4	-	60	60	-	-	40	3	40	100
3.5	ELECTRIC MACHINE- 1 (Lab)	PROGRAM CORE (PRACTICAL)	-	-	04	2	-	60	60	-	-	40	3	40	100
3.6	ADVANCE SKILL CERTIFICATION	OPEN ELECTIVE-1*	02	-	-	2	-	-	-	-	-	-	-	-	NA
3.7	MINOR PROJECT**		-	-	-	2	-	50*	50*	-	-	-	-	-	50*
#STUDENT CENTERED ACTIVITIES			-	-	12	-	-	50	50	-	-	-	-	-	50
Total			**12**		**24**	**20**	**80**	**280**	**360**	**120**		**120**		**240**	**600**

* Students can earn 2 credits for Open Elective courses either by completing a relevant certification from recognized external platforms such as TATA Technologies, NPTEL, or similar, upon submission and verification of the certificate; or by completing the course offered by their own polytechnic institute, in which case credits will be awarded based on internal assessment. conducted by the institute.

** Lateral entry students shall undertake a minor project and deliver a presentation on the same. This project will serve as an equivalent to summer internship-I for the purpose of earning the associated credits and marks.

Student Centered Activitieswillcompriseofco-curricularactivitieslikeextensionlectures,games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C.,NSS, library, Cultural Activities and self-study etc.

A. COMPULSORY SUBJECT OF I & II SEMESTER ELECTRICAL ENGINEERING TO BE TAUGHT IN III & IV SEMESTER TO ITI PASSED STUDENTS OF TRADES ARE AS FOLLOWS :
I. WIREMAN II. ELECTRICIAN III. ELECTROPLATER IV. ELECTRICAL SECTOR

Sr. No.	SUBJECTS	STUDY SCHEME Periods/Week				Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
							INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
		L	T	P	Total		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
1.1	*MATHEMATICS-I	2	1	-	3	3	40	-	40	60	3	-	-	60	100
1.2	*APPLIED PHYSICS-I	3	-	2	5	4	40	60	100	60	3	40	3	100	200
1.3	*APPLIED CHEMISTRY	3	-	2	5	4	40	60	100	60	3	40	3	100	200
1.4	*COMMUNICATION SKILLS IN ENGLISH	3	-	2	5	4	40	60	100	60	3	40	3	100	200
TOTAL		**11**	**1**	**6**	**18**	**15**	**160**	**180**	**340**	**240**		**120**		**360**	**700**

* Common with other diploma programmes

Student Centred Activities will comprise of co-curricular activities like extension lectures, self study, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, disaster management and safety etc.

(*) It is compulsory to appear & to pass in examination From III Semester To VI Semester, But credit/marks will not be included for division and percentage of obtained marks.

(*) Four Semester (Two Years) of Extra Time will be given after diploma curriculum period (If Required) to pass the above paper (1.1 To 1.4 and 2.1 to 2.2) examination (As Per G. O. No. 2221/16-Pra. Shi.-3-2009 Dated 28-08-2009) & Revised G.O. No. 2704/16-Pra.Shi.-3-2013-46(8)/2002 Dated 09-01-2013 and B.T.E Order No. Pra.Shi.Pa/C.D.C./2022/872021 Dated 21.02.22

STUDY AND EVALUATION SCHEME FOR LATERAL ENTRY AND ITI PASSES STUDENTS ELECTRICALENGINEERING

FOURTH SEMESTER

Sr. No.	SUBJECTS	COURSE TYPE & CATEGORY	STUDY SCHEME Periods/Week			Credits	MARKSINEVALUATIONSCHEME								Total Marks of Internal & External
							INTERNAL ASSESSMENT			EXTERNALASSESSMENT					
			L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
4.1	ELECTRIC POWER TRANSMISSION AND DISTRIBUTION	PROGRAM CORE (THEORY)	03	-	-	3	40	-	40	60	3	-	-	60	100
4.2	ELECTRIC MACHINE- II	PROGRAM CORE (THEORY)	03	-	-	3	40	-	40	60	3	-	-	60	100
4.3	FUNDAMENTALS OF POWER ELECTRONICS	PROGRAM CORE (PRACTICUM)	02	-	04	4	-	60	60	-	-	40	3	40	100
4.4	PROGRAM ELECTIVE -1	PROGRAM CORE (PRACTICUM)	01		04	3	-	60	60	-	-	40	3	40	100
4.5	PROGRAM ELECTIVE -2	PROGRAM CORE (THEORY)	03		-	3	40	-	40	60	3			60	100
4.6	ELECTRIC MACHINE- II (Lab)	PROGRAM CORE (PRACTICAL)	-	-	04	2	-	60	60	-	-	40	3	40	100
4.7	ADVANCE SKILL CERTIFICATION	OPEN ELECTIVE-2*	02	-	-	2	-	-	-	-	-	-	-	-	NA
4.8	ESSENCE OF INDIAN KNOWLEDGE AND TRADITION	AUDIT COURSE	02	-	-	-	50	-	50	-	-	-	-	-	NA
#STUDENT CENTERED ACTIVITIES			-	-	08	-	-	50	50	-	-	-	-	-	50
Total			**16**		**20**	**20**	**120**	**230**	**350**	**180**		**120**		**300**	**650**

* Students can earn 2 credits for Open Elective courses either by completing a relevant certification from recognized external platforms such as TATA Technologies, NPTEL, or similar, upon submission and verification of the certificate; or by completing the course offered by their own polytechnic institute, in which case credits will be awarded based on internal assessment. conducted by the institute.

Student Centered Activitieswillcompriseofco-curricularactivitieslikeextensionlectures,games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C.,NSS, library, Cultural Activities and self-study etc.

B. COMPULSORY SUBJECT OF I & II SEMESTER ELECTRICAL ENGINEERING TO BE TAUGHT IN III & IV SEMESTER TO ITI PASSED STUDENTS OF TRADES ARE AS FOLLOWS :
I. WIREMAN II. ELECTRICIAN III. ELECTROPLATER IV. ELECTRICAL SECTOR

Sr. No.	SUBJECTS	STUDY SCHEME Periods/Week				Credits	MARKS IN EVALUATION SCHEME								TOTAL MARKS OF INTERNAL & EXTERNAL
							INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
		L	T	P	Total		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
2.1	*MATHEMATICS-II	3	1	-	4	4	40	-	40	60	3	-	-	60	100
2.2	*APPLIED PHYSICS-II	3	-	2	5	4	40	60	100	60	3	40	3	100	200
Total		**6**	**1**	**2**	**9**	**8**	**80**	**60**	**140**	**120**		**40**		**160**	**300**

* Common with other diploma programme

\# Student Centred Activities will comprise of co-curricular activities like extension lectures, self study, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, disaster management and safety etc.

Summer Internship (Industrial training) of 4 weeks duration to be organised after 4th semester exams

(*) It is compulsory to appear & to pass in examination From III Semester To VI Semester, But credit/marks will not be included for division and percentage of obtained marks.

(*) Four Semester (Two Years) of Extra Time will be given after diploma curriculum period (If Required) to pass the above paper (1.1 To 1.4 and 2.1 to 2.2) examination (As Per G. O. No. 2221/16-Pra. Shi.-3-2009 Dated 28-08-2009) & Revised G.O. No. 2704/16-Pra.Shi.-3- 2013-46(8)/2002 Dated 09-01-2013 and B.T.E Order No. Pra. Shi. Pa/ C.D.C./ 2022/872021 Dated 21.02.22

STUDY AND EVALUATION SCHEME FOR LATERAL ENTRY AND ITI PASSES STUDENTS ELECTRICALENGINEERING

FIFTH SEMESTER

Sr. No.	SUBJECTS	COURSE TYPE & CATEGORY	STUDY SCHEME Periods/Week			Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
							INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
			L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
5.1	SWITCH GEAR AND PROTECTION	PROGRAM CORE (THEORY)	03	01	-	4	40	-	40	60	3	-	-	60	100
5.2	PROGRAM ELECTIVE-3	PROGRAM CORE (THEORY)	03	-	-	3	40	-	40	60	3	-	-	60	100
5.3	ENERGY CONSERVATION AND AUDIT	PROGRAM CORE (PRACTICUM)	02	-	04	4		60	60	-	-	40	3	40	100
5.4	PROGRAM ELECTIVE-4	PROGRAM CORE (PRACTICUM)	01	-	04	3	-	60	60	-	-	40	3	40	100
5.5	(Q) INDIAN CONSTITUTION	AUDIT COURSE	02	-	-	-	50	-	50	-	-	-	-	-	N/A
5.6	ELECTRICAL ESTIMATION AND CONTRACTING	PROGRAM CORE (PRACTICUM)	02	-	04	4	-	60	60	-	-	40	3	40	100
5.7	SUMMER INTERNSHIP** (6 WEEKS)	-	-	-	-	2	-	60	60	-	-	40	3	40	100
	#STUDENT CENTERED ACTIVITIES	-	-	-	10	-		50	50	-	-	-	-	-	50
Total		-	**13**	01	**22**	**20**	80	**290**	**370**	**120**		**160**		**280**	**650**

NOTE –

1. (Q) - It is compulsory to appear & to pass in examination, but marks will not be included for division and percentage of obtained marks.
2. Students will submit the certificate.
3. ** Students will present a seminar/viva on their summer internship along with certificate, project and report.
4. # Student Centered Activities will comprise of co-curricular activities like extension lectures, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C.,NSS, library, Cultural Activities and self-study etc.

STUDY AND EVALUATION SCHEME FOR LATERAL ENTRY AND ITI PASSES STUDENTS ELECTRICALENGINEERING

SIXTH SEMESTER **NORMAL PATHWAY**

Sr. No.	SUBJECTS	COURSE TYPE & CATEGORY	STUDY SCHEME Periods/Week			Credits	MARKS INEVALUATION SCHEME								Total Marks of Internal & External
							INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
			L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
6.1	BUILDING ELECTRIFICATION	PROGRAM CORE (PRACTICUM)	02	-	04	4	-	60	60	-	-	40	3	40	100
6.2	ENTREPRENEURSHIP AND START-UP	HUMANITIES AND SOCIAL SCIENCE	02	-	-	2	40	-	40	60	3	-	-	60	100
6.3	IN-HOUSE PROJECT	PROJECT	04	-	16	12	-	240	240	-	-	160	-	160	400
6.4	ADVANCE SKILL DEVELOPMENT	(Q)OPEN ELECTIVE-3 (THEORY)	02	-	-	2	50	-	-	-	-	-	-	-	N/A
		(Q)OPEN ELECTIVE-3 (Certification Course)													N/A
#STUDENT CENTERED ACTIVITIES			-	-	06	-	-	50	50	-	-	-	-	-	50
Total			**10**		**26**	**20**	**40**	**350**	**390**	**60**		**200**		**260**	**650**

NOTE: -

1. # Student Centered Activities will comprise of co-curricular activities like extension lectures, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C., NSS, library, Cultural Activities and self-study etc.
2. (Q) It is compulsory to appear and to pass the examination, but marks will not be included for percentage and division of obtained marks.
3. Advance skill development mention at 6.4 in the table provides the scope of selecting the course as per choice from the elective list provided in the syllabus conducted by various agencies of repute of duration not less than 20 Hrs (Offline/Online).

OR

SIXTH SEMESTER **INDUSTRIAL PATHWAY**

Sr. No.	SUBJECTS	CATEGORY & COURSE TYPE	STUDY SCHEME Periods/Week			Credits(C) (L+T)+P=C	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External	ASSESSMENT
							INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT						
			L	T	P		Th	Pr	Tot	Th	Hrs.	Pr	Hrs	Tot		
6.1	ENTREPRENEURSHIP AND START-UPS (ONLINE MODE)	HUMANITIES & SOCIAL SCIENCE (THEORY)	-	-	-	2	-	-	-	100	03	-	-	100	**100**	**THEORY**
6.2	INDUSTRIAL HANDS-ON PRACTICE	INDUSTRIAL TRAINING	-	-	-	12	150*			200**					**350**	
6.3	INDUSTRIAL PROJECT	INDUSTRIAL TRAINING	-	-	-	4	50*			50**					**100**	
6.4	SEMINAR	IN HOUSE	-	-	-	2	-	100	100	-	-	-	-	-	**100**	
Total			**-**	**-**	**-**	**20**									**650**	

NOTE:

1. The Industrial training tenure should not be less than 14 weeks.
2. Industry must be registered with MSME/Directorate of industries/Limited Organization/State/Central Government establishments.
3. Monthly progress reports of Intern/ Trainee should be attested and forwarded by industrial supervisor (allotted to Intern/Trainee) during industrial Internship/Training.
4. The Industrial unit/organisation must evaluate students using the format provided by polytechnic in the form of marks.
5. The Industrial Hands on Practice, Industrial Project and seminar must be evaluated on the basis of the AICTE Internship Policy: Guidelines and procedures (Chapter -9 Procedures / format for organizing internship)
6. "Entrepreneurship and Start-up" course is also mandatory in Industrial internship/training mode. It will be conducted online mode by his/her polytechnic institute. After completing the online course, students must appear for exam conducted by the Board of Technical Education, Lucknow.
7. ***Evaluation by faculty mentor**
   The institute will depute one faculty member for mentoring at least 20-30 students undertaking apprenticeship training. Such mentors will monitor, guide and provide counselling to the students as and when required. Faculty mentor of the institute(s) may make a surprise visit to the internship/apprenticeship site to check the student's presence physically. (The Proforma of the evaluation is attached as the Annexure -1)
8. ** **Evaluation by industry** : The industry shall assess the candidates based on the following parameters attendance, discipline and punctuality, familiarity of tools and material, engineering skills, application of knowledge and problem-solving skills, comprehension and observation, professional ethics, safety and environmental consciousness, communication skills, supervisory skills and general conduct during the period (The Proforma of the evaluation is attached as the Annexure -2)
9. **# Evaluation through seminar presentation/Viva-Voce at the institute :** The student will give a seminar based on his training report, before an expert committee constituted by the concerned department as per norms of the institute. The evaluation will be based on the following criteria:

OPEN ELECTIVE-1

SR.NO.	SUBJECT NAME
1.	ENGINEERING ECONOMICS & ACCOUNTANCY (Course offered by Polytechnic Institute) OR DISASTER MANAGEMENT (Course offered by Polytechnic Institute)
2.	PRODUCT DESIGN AND DEVELOPMENT (Course offered by TATA Technology) OR FUNDAMENTALS OF INNOVATION AND DESIGN THINKING(Course offered by TATA Technology)
3.	ANY COURSE OF MINIMUM 02 CREDIT FROM NPTEL MOOCS THROUGH SWAYAM AICTE-ELIS AND CENTRALLY FUNDED TECHNICAL INSTITUTES C-DAC CERTIFICATIONS CONDUCTED BY THE INSTITUTE OF NATIONAL IMPORTANCE (IIT,NIT,IIIT ETC.) ISRO E-LEARNING OTHER RELEVANT GOVERNMENT, INTERNATIONAL/NATIONAL PLATFORMS OF REPUTE NEILIT

OPEN ELECTIVE -2

SR.NO.	SUBJECT NAME
1.	ECONOMIC POLICIES IN INDIA (Course offered by Polytechnic Institute) OR MECHATRONICS (Course offered by Polytechnic Institute)
2.	ELECTRIC VEHICLE (Course offered by TATA Technology) OR INDUSTRIAL ROBOTICS(Course offered by TATA Technology)
3.	ANY COURSE OF MINIMUM 02 CREDIT FROM NPTEL MOOCS THROUGH SWAYAM AICTE-ELIS AND CENTRALLY FUNDED TECHNICAL INSTITUTES C-DAC CERTIFICATIONS CONDUCTED BY THE INSTITUTE OF NATIONAL IMPORTANCE (IIT,NIT,IIIT ETC.) ISRO E-LEARNING OTHER RELEVANT GOVERNMENT, INTERNATIONAL/NATIONAL PLATFORMS OF REPUTE NEILIT

OPEN ELECTIVE-3

SR.NO.	SUBJECT NAME
1.	PROJECT MANAGEMENT
2.	INTERNET OF THINGS
SR.NO.	**CERTIFICATE COURSES**
1.	COURSES CONDUCTED BY CENTRE OF EXCELLENCE (ESTABLISHED BY THIRD PARTY AS: - TATA TECHNOLOGIES. etc) (Annexure 1)
2.	COURSES CONDUCTED BY INFOSYS SPRINGBOARD
3.	COURSES CONDUCTED BY TCS ION
4.	COURSES CONDUCTED BY OTHER RELEVANT GOVERNMENT, INTERNATIONAL/NATIONAL ORGANIZATION OR PLATFORMS OF REPUTE
5.	COURSES CONDUCTED BY AICTE-ELIS AND CENTRALLY FUNDED TECHNICAL INSTITUTES
6.	COURSES CONDUCTED BY C-DAC
7.	COURSES CONDUCTED BY NEILIT

PROGRAME ELECTIVE-1

SR.NO.	SUBJECT NAME
1.	INDUSTRIAL AUTOMATION AND CONTROL
2.	INDUSTRIAL INSTRUMENTATION AND CONDITION MONITORING

PROGRAME ELECTIVE-2

SR.NO.	SUBJECT NAME
1.	RENEWABLE ENERGY POWER PLANTS
2.	BIOMASS AND MICRO-HYDRO POWER PLANTS

PROGRAME ELECTIVE-3

SR.NO.	SUBJECT NAME
1.	SOLAR POWER TECHNOLOGIES
2.	ELCTRIC TRACTION

PROGRAME ELECTIVE-4

SR.NO.	SUBJECT NAME
1.	ELECTRICAL TESTING AND COMMISSIONING
2.	ILLUMINATION PRACTICES

ANNEXURE-1

LIST OF COURSES CONDUCTED BY TATA TECHNOLOGIES

1. Fundamentals of Innovation and Design Thinking
2. Product Design and Development
3. Product Verification and Analysis
4. Advanced Automobile
5. Electric Vehicle
6. Internet of Things
7. Advanced Manufacturing
8. Advanced Welding & Painting using Simulator
9. Industrial Automation and MES
10. Industrial Robotics
11. Inspection and Quality Control
12. Advanced Plumbing
13. AI and ML