

Integral University Lucknow
Study & Evaluation Scheme
B. Tech. (Electrical Engg.)

YEAR I, Semester-I

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
				L	T	P	C	Sessional		Exam.		
								CT	TA	Total	ESE	
Theory Subjects												
1	PY 101	BS	Physics	3	1	0	4	25	15	40	60	100
2	LN101	HM	Basic Professional Communication	2	1	0	3	25	15	40	60	100
3	MT101	BS	Mathematics I	3	1	0	4	25	15	40	60	100
4	EE103	ESA	Basic Electrical Engg.	3	1	0	4	25	15	40	60	100
5	EC101	ESA	Basic Electronics	3	1	0	4	25	15	40	60	100
6	PY104	BS	Physics Lab	0	0	2	1	30	30	60	40	100
7	EE104	ESA	Electrical Engg. Lab	0	0	2	1	30	30	60	40	100
8	ME103	ESA	Engg Graphics	0	1	2	1	30	30	60	40	100
9	ME104	ESA	Workshop Practice	0	0	2	2	30	30	60	40	100
			Total	14	6	8	24	245	195	440	460	900

L-Lecture **T**-Tutorial **P**-Practical **C**-Credits **CT**-Class Test **TA**-Teacher Assessment

Sessional Total (CA) = Class Test + Teacher Assessment

Subject Total = Sessional Total (CA) + End Semester Examination (ESE)

BS- Basic Science

DC- Departmental Core

HM- Humanities

OE- Open Elective

DE- Departmental Elective

ESA- Engineering Sciences & Arts (Foundation Course & Engineering Courses)

Integral University Lucknow
Study & Evaluation Scheme
B. Tech. (Electrical Engineering)

YEAR I, Semester-II

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
				L	T	P	C	Sessional		Exam.		
								CT	TA	Total	ESE	
Theory Subjects												
10.	CH 101	BS	Chemistry	3	1	0	4	25	15	40	60	100
11.	ES 101	ESA	Environmental Studies	2	1	0	3	25	15	40	60	100
12.	MT 112	BS	Mathematics II	3	1	0	4	25	15	40	60	100
13.	ME 101	ESA	Basic Mechanical Engg.	3	1	0	4	25	15	40	60	100
14.	CS 101	ESA	Computer Programming	3	1	0	4	25	15	40	60	100
15.	CH 102	BS	Chemistry Lab	0	0	2	1	30	30	60	40	100
16.	ME 102	ESA	Mechanical Engg. Lab	0	0	2	1	30	30	60	40	100
17.	CS 102	ESA	Computer Programming Lab	0	0	2	1	30	30	60	40	100
18.	LN 151	HM	Professional Communication Lab	0	1	2	2	30	30	60	40	100
			Total	14	6	8	24	245	195	440	460	900

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YEAR II, Semester- III

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
				L	T	P	C	Sessional			Exam.	
								CT	TA	Total	ESE	
Theory Subjects												
1	EE- 201	DC	Linear Network & Systems	3	1	0	4	25	15	40	60	100
2	EE-203	DC	Electro Mechanical Energy Conversion-I	3	1	0	4	25	15	40	60	100
3	EE-205	DC	Solid State Devices & Circuit	3	1	0	4	25	15	40	60	100
4	EE-207	DC	Fundamentals of EMFT	3	1	0	4	25	15	40	60	100
5	MT-201	BS	Engineering Mathematics-	3	1	0	4	25	15	40	60	100
6	CS- 203	ESA	Cyber Law & Information Security	2	1	0	3	25	15	40	60	100
*	BM-226	HM	Human Values and Professional Ethics	2	1	0	0	-	-	-	50	50
7	EE-202	DC	Network Lab	0	0	2	1	30	30	60	40	100
8	EE-204	DC	Electromechanical Energy Conversion-I Lab	0	0	2	1	30	30	60	40	100
9	EE-206	DC	Solid State Devices & Circuit Lab	0	0	2	1	30	30	60	40	100
10	EE-208	DC	Electrical Workshop	0	0	2	1	30	30	60	40	100
			Total	19	7	8	27	270	210	480	520	1000

*Audit Course Human Values and Professional Ethics (BM-226) This is compulsory audit course in which a student must to be clear this paper with 50% passing marks up to the final year and marks will not be included in result.

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Year II, Semester- IV

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
				L	T	P	C	Sessional			Exam.	
								CT	TA	Total	ESE	
Theory Subjects												
1	EE209	DC	Electrical Measurement & Measuring Instruments	3	1	0	4	25	15	40	60	100
2	EE211	DC	Electro Mechanical Energy Conversion-II	3	1	0	4	25	15	40	60	100
3	EE213	DC	Numerical Analysis & Applications	3	1	0	4	25	15	40	60	100
4	EE217	DC	Signal System Analysis	3	1	0	4	25	15	40	60	100
5	ES202	HM	Disaster management	2	1	0	3	25	15	40	60	100
6		DE	Departmental Elective -I	3	1	0	4	25	15	40	60	100
7	EE210	DC	Electrical Measurement Lab	0	0	2	1	30	30	60	40	100
8	EE212	DC	Electro Mechanical Energy Conversion-II Lab	0	0	2	1	30	30	60	40	100
9	EE214	DC	Numerical Analysis and Applications Lab	0	0	2	1	30	30	60	40	100
10	EE216	DC	Electrical Simulation Lab	0	0	2	1	30	30	60	40	100
			Total	17	6	8	27	270	210	480	520	1000

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INTEGRAL UNIVERSITY LUCKNOW
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Year 3rd, Semester-V

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
								Sessional			Exam.	
				L	T	P	C	CT	TA	Total	ESE	
Theory Subjects												
1.	EE-301	DC	Control Systems	3	1	0	4	25	15	40	60	100
2.	EE-303	DC	Power Electronics	3	1	0	4	25	15	40	60	100
3.	EE-305	DC	Digital Circuits and Systems	3	1	0	4	25	15	40	60	100
4.	EE-307	DC	Power System I	3	1	0	4	25	15	40	60	100
5.	BM 338	HM	Industrial Management	2	1	0	3	25	15	40	60	100
6.		DE	Departmental Elective -II	3	1	0	4	25	15	40	60	100
7.	EE-302	DC	Control System Lab	0	0	2	1	30	30	60	40	100
8.	EE-304	DC	Power Electronics Lab	0	0	2	1	30	30	60	40	100
9.	EE-306	DC	Digital Circuits and Systems Lab	0	0	2	1	30	30	60	40	100
10.		DE	Departmental Elective -III	0	0	2	1	30	30	60	40	100
			Total	17	6	8	27	270	210	480	520	1000

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Study & Evaluation Scheme
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Year 3rd, Semester-VI

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
				L	T	P	C	Sessional		Exam.		
								CT	TA	Total	ESE	
Theory Subjects												
1.	EE311	DC	Power System II	3	1	0	4	25	15	40	60	100
2.	EE313	DC	Microprocessor & Peripheral Devices	3	1	0	4	25	15	40	60	100
3.		DE	Departmental Elective -IV	3	1	0	4	25	15	40	60	100
4.		DE	Departmental Elective -V	3	1	0	4	25	15	40	60	100
5.		DE	Departmental Elective –VI	2	1	0	3	25	15	40	60	100
6.		OE	Open Elective-1	3	1	0	4	25	15	40	60	100
7.	EE312	DC	Power System Lab	0	0	2	1	30	30	60	40	100
8.	EE314	DC	Microprocessor & Peripheral Devices Lab	0	0	2	1	30	30	60	40	100
9.		DE	Departmental Elective -VII	0	0	2	1	30	30	60	40	100
10.		DE	Departmental Elective -VIII	0	0	2	1	30	30	60	40	100
			Total	17	6	8	27	270	210	480	520	1000

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INTEGRAL UNIVERSITY LUCKNOW
Study & Evaluation Scheme
B. Tech. (Electrical Engg.)

Year 4th, Semester-VII

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
								Sessional			Exam.	
				L	T	P	C	CT	TA	Total	ESE	
Theory Subjects												
1.	EE401	DC	Power System Protection	3	1	0	4	25	15	40	60	100
2.	EE403	DC	Electric Drives	3	1	0	4	25	15	40	60	100
3.		DE	Departmental Elective –IX	3	1	0	4	25	15	40	60	100
4.		DE	Departmental Elective –X	3	1	0	4	25	15	40	60	100
5.		DE	Departmental Elective –XI	3	1	0	4	25	15	40	60	100
6.	EE402	DC	Power System Protection Lab	0	0	2	1	30	30	60	40	100
7.	EE404	DC	Electric Drive Lab	0	0	2	1	30	30	60	40	100
8.	EE406	DC	B.Tech. Project	0	0	2	1	-	100	100	-	100
9.	*EE300		Industrial Training	-	-	-	-	-	50	50	-	50
			Total	14	5	8	23	215	235	420	380	800

*Industrial Training (EE-300) is compulsory during summer vacation of third year in which a student must obtain 50% passing marks. These marks will not be included in result.

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Year 4th, Semester-VIII

S. No.	Subject Code	Category	Subject	Periods				Evaluation Scheme				Subject Total
								Sessional			Exam.	
				L	T	P	C	CT	TA	Total	ESE	
Theory Subjects												
1.	EE451	DC	Seminar	-	-	-	2		100	100		100
2.	EE499	DC	B.Tech. Project	-	-	-	4		60	60	40	100
3.	EE499	DC	B.Tech. Project	-	-	-	4		60	60	40	100
4.	EE499	DC	B.Tech. Project	-	-	-	4		60	60	40	100
5.	EE452	DC	Comprehensive Viva	-	-	-	3		100	100		100
6.		OE	Open Elective-2	3	1	0	4	25	15	40	60	100
			Total	3	1	0	21	25	395	420	180	600

L-Lecture T-Tutorial P-Practical C-Credits CT-Class Test TA-Teacher Assessment

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INTEGRAL UNIVERSITY, LUCKNOW

B. Tech. (Electrical Engg.)

List of Electives

Departmental Elective – I

- | | |
|---|---------|
| 1- Electrical Engineering Materials | EE-221 |
| 2- Probability Foundations for Electrical Engineers | EE-222 |
| 3- OOP & C++ | CS- 205 |

Departmental Elective – II

- | | |
|--|---------|
| 1. Measurement & Instrumentation | EE-321 |
| 2. Process Instrumentation | EE-323 |
| 3. Conventional & CAD of Electrical Machines | EE-325 |
| 4. Integrated Circuits | EC- 302 |

Departmental Elective – III

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|--|---------|-----------------------|
| 1. Measurement and Instrumentation Lab | EE-322 | [Co-Requisite EE-321] |
| 2. Process Instrumentation Lab | EE-324 | [Co-Requisite EE-323] |
| 3. Machine Design Lab | EE- 326 | [Co-Requisite EE-325] |
| 4. Integrated Circuits Lab | EC- 309 | [Co-Requisite EC 302] |

Departmental Elective – IV

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|------------------------------|--------|
| 1. Modern Power System | EE-331 |
| 2. Advance Control System | EE-333 |
| 3. Industrial Automation | EE-335 |
| 4. Communication Engineering | EC-336 |

Departmental Elective – V

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|---|--------|
| 1. Introduction to Soft Computing | EE-341 |
| 2. Renewable Energy Technology | EE-343 |
| 3. Power Electronics based Converters Design | EE-345 |
| 4. Modeling and Dynamic analysis of Electrical Machines | EE-347 |

Departmental Elective – VI

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|--|--------|
| 1. Sensor and Instrumentation | EE-351 |
| 2. Power Station Practice | EE-353 |
| 3. Nuclear & Advance Power Generation Technology | EE-355 |
| 4. Biomedical Engineering | EE-357 |
| 5. Energy Management | EE-359 |

Departmental Elective – VII

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|------------------------------------|--------|----------------------|
| 1. Computer Aided Power System Lab | EE-332 | [Co requisite EE331] |
| 2. Advance Control System Lab | EE-334 | [Co requisite EE333] |
| 3. Automation Lab | EE-336 | [Co requisite EE335] |
| 4. Communication Engineering Lab | EC-337 | [Co requisite EC336] |

Departmental Elective – VIII

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|------------------------------------|---------|-----------------------|
| 1. Soft Computing Lab | EE- 342 | [Co requisite EE 341] |
| 2. Renewable Energy Lab | EE- 344 | [Co requisite EE 343] |
| 3. Converters Lab | EE- 346 | [Co requisite EE 345] |
| 4. Electrical machine modeling lab | EE- 348 | [Co requisite EE 347] |

Departmental Elective –IX

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|--|--------|
| 1. Electrical Insulation in Power Apparatus & System | EE-421 |
| 2. Application of Power Electronics to Power System | EE-423 |
| 3. EHVAC & EHVDC Transmission | EE-425 |
| 4. Power System Dynamics | EE-427 |
| 5. DSP and its application | EE-429 |

Departmental Elective – X

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|--|--------|
| 1. Utilization of Electrical Energy & Traction | EE-431 |
| 2. Power Quality & Mitigation | EE-433 |
| 3. High Voltage DC Transmission | EE-435 |
| 4. Electrical Distribution System & Automation | EE-437 |
| 5. High Power Semiconductor Devices | EE-439 |

Departmental Elective –XI

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|--|--------|
| 1. Flexible AC Transmission System | EE-441 |
| 2. Special Electric Machines | EE-443 |
| 3. Electrical System and Substation Design | EE-445 |
| 4. Electric Vehicles | EE-447 |
| 5. Energy Conservation &Energy Audit | EE-449 |