Integral University, Lucknow
Department of Physics
Study and Evaluation Scheme of Under Graduate & Post Graduate Program as per NEP-2020 Guidelines
w.e.f. Session 2024-25

Degree in Science (Physics & Mathematics) **Year: Third / Semester: Fifth (Odd Semester)**

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG
							CIE			UE											
				L	T	P	CT	TA	CIE Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
THEORY																					
1	B010501T/ PY311	Classical & Statistical Mechanics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
2	B010502T/ PY312	Quantum Mechanics and Spectroscopy	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
3	B030501T/ MT320	Group and Ring Theory & Linear Algebra	Major	4	0	0	15	10	25	75	100	5:0:0	5	✓		✓					
4	(a) B030502T/ MT321 (b)B030503T/ MT322 (c)B030504T/ MT323	Opt any one of the following: (a) Number Theory & Game Theory (b) Graph Theory& Discrete Mathematics (c) Differential Geometry & Tensor Analysis	Major	4	0	0	15	10	25	75	100	5:0:0	5	✓		✓					
5	Z050501/ MT337	Analytic Ability and Digital Awareness	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓	
PRACTICAL																					
6	B010503P/ PY313	Demonstrative Aspects of Optics & Lasers	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					
7	B030503R/ PY316	Physics Project-I	Major	0	0	6	0	0	0	100	100	0:0:3	3	✓		✓		✓		✓	
			Total	**18**	**0**	**10**	**90**	**60**	**150**	**550**	**700**	**25**	**25**								

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Degree in Science (Physics & Mathematics) **Year: Third / Semester: Sixth (Even Semester)**

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG
							CIE			UE											
				L	T	P	CT	TA	CIE Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
THEORY																					
1	B010601T/ PY314	Solid State and Nuclear Physics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
2	B010602T/ PY315	Analog & Digital Principles & Applications	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
3	B030601T/ MT324	Metric Space & Complex Analysis	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
4	B030602T/ MT325	Numerical Analysis & Operations Research	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
5	Z060601/ LN343	Communication Skills and Personality Development	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓	
PRACTICAL																					
6	B010603P/ PY316	Analog & Digital Circuits	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					
7	B030603P/ MT326	Practical on Numerical analysis using Mathematica /MATLAB	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓		✓		✓	
8	B030604R/ PY317	Physics Project-II	Major	0	0	6	0	0	0	100	100	0:0:3	3	✓		✓		✓		✓	
Total				**18**	**0**	**14**	**105**	**70**	**175**	**625**	**800**	**25**	**25**								

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Degree in Science (Physics & Electronics) **Year: Third / Semester: Fifth (Odd Semester)**

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG
							CIE			UE											
				L	T	P	CT	TA	CIE Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
THEORY																					
1	B010501T/ PY311	Classical & Statistical Mechanics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
2	B010502T/ PY312	Quantum Mechanics and Spectroscopy	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
3	B140501T/ EC391	Electromagnetics and Antenna Fundamentals	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
4	B140502T/ EC392	Microprocessor Programming and Interfacing	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
5	Z050501	Analytic Ability and Digital Awareness	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓	
PRACTICAL																					
6	B010503P/ PY313	Demonstrative Aspects of Optics & Lasers	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					
7	B140503P/ EC393	Antenna and Microprocessor Lab	Major	0	0	4	15	10	0	100	100	0:0:2	2	✓		✓					
8	B030503R/ PY316	Physics Project-I	Major	0	0	6	0	0	0	100	100	0:0:3	3	✓		✓		✓		✓	
			Total	**18**	**0**	**14**	**105**	**70**	**150**	**650**	**800**	**25**	**25**								

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Degree in Science (Physics & Electronics) **Year: Third / Semester: Sixth (Even Semester)**

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG
							CIE			UE											
				L	T	P	CT	TA	CIE Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
THEORY																					
1	B010601T/ PY314	Solid State and Nuclear Physics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
2	B010602T/ PY315	Analog & Digital Principles & Applications	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
3	B140601T/ EC394	Communication Electronics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
4	B140602T/ EC395	Linear Integrated Circui	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
5	Z060601	Communication Skills and Personality Development	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓	
PRACTICAL																					
6	B010603P/ PY316	Analog & Digital Circuits	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					
7	B140603P/ EC396	IC and Communication Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					
8	B030604R/ PY317	Physics Project-II	Major	0	0	6	0	0	0	100	100	0:0:3	3	✓		✓		✓		✓	
Total				**18**	**0**	**14**	**105**	**70**	**175**	**625**	**800**	**25**	**25**								

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Degree in Science (Mathematics & Electronics) **Year: Third / Semester: Fifth (Odd Semester)**

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG
							CIE			UE											
				L	T	P	CT	TA	CIE Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
THEORY																					
1	B030501T/ MT320	Group and Ring Theory & Linear Algebra	Major	4	0	0	15	10	25	75	100	5:0:0	5	✓		✓					
2	(a) B030502T/ MT321 (b)B030503T/ MT322 (c)B030504T/ MT323	Opt any one of the following: (a) Number Theory & Game Theory (b) Graph Theory& Discrete Mathematics (c) Differential Geometry & Tensor Analysis	Major	4	0	0	15	10	25	75	100	5:0:0	5	✓		✓					
3	B140501T/ EC391	Electromagnetics and Antenna Fundamentals	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
4	B140502T/ EC392	Microprocessor Programming and Interfacing	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
5	Z050501	Analytic Ability and Digital Awareness	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓	
PRACTICAL																					
6	B140503P/ EC393	Antenna and Microprocessor Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					
7	B030503R/ EC397	Electronics Project-I	Major	0	0	6	0	0	0	100	100	0:0:3	3	✓		✓		✓		✓	
			Total	**18**	**0**	**10**	**90**	**60**	**150**	**550**	**700**	**25**	**25**								

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Degree in Science (Mathematics & Electronics) **Year: Third / Semester: Sixth (Even Semester)**

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG
							CIE			UE											
				L	T	P	CT	TA	CIE Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
THEORY																					
1	B030601T/ MT324	Metric Space & Complex Analysis	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
2	B030602T/ MT325	Numerical Analysis & Operations Research	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
3	B140601T/ EC394	Communication Electronics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
4	B140602T/ EC395	Linear Integrated Circui	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓					
5	Z060601	Communication Skills and Personality Development	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓	
PRACTICAL																					
6	B140603P/ EC396	IC and Communication Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					
7	B030603P/ MT326	Practical on Numerical analysis using Mathematica /MATLAB	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓		✓		✓	
8	B030604R/ EC398	Electronics Project-II	Major	0	0	6	0	0	0	100	100	0:0:3	3	✓		✓		✓		✓	
Total				**18**	**0**	**14**	**105**	**70**	**175**	**625**	**800**	**25**	**25**								