



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

As per NEP-2020 Guidelines w.e.f. Session 2024-25

First Year: Certificate in Physics (1st Semester)

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes								SDG
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010101T/ PY113	Mathematical Physics and Newtonian Mechanics	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
2	B010103T / PY119	Renewable Energy and Energy Harvesting	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓		✓		 		
3	A050101T/ HM101	Rashtra Gaurav	Audit Course	2	0	0	--	--	--	100	100	0:0:0	0						✓			
4	I010101V/ PY117	Electrician	Minor (Vocational)	2	1	0	--	--	--	100	100	3:0:0	3	✓		✓				 		
5	Z010101T/ BE105	Food, Nutrition and Hygiene	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓		
PRACTICAL																						
6	B010102P/ PY114	Mechanical Properties of Matter	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓				 		
7	B010104P / PY120	Solar Energy Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓				 		
Total				16	3	8	75	50	125	575	700	17	17									



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

As per NEP-2020 Guidelines w.e.f. Session 2024-25

First Year: Certificate in Physics (2nd Semester)

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG	
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010201T/ PY115	Thermal Physics and Semiconductor Devices	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
2	B010203T/ PY122	Basics of Astrophysics and Cosmology	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
3	(a) B030201T/ MT138 OR (b) B020201T/ CH139 + B020202P/ CH141 OR (c) B070201T/ CS129 + B070202P/ CS130	Choose anyone from following (a) Matrices and Differential Equations & Geometry (T-6) (b) Bioorganic and Materials Chemistry (T-4) + Biochemical Analysis (P-2) (c) Database Management Systems (T-4) + Database Management Systems Lab (P-2)	Minor (T + P)	5	1	0	15	10	25	75	100	6:0:0	6	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
4	B010205/ PY118	Artificial Intelligence and Physics	Audit Course	2	0	0	--	--	--	100	100	0:0:0	0	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
5	I010201V/ ME161	Refrigeration and Air-conditioning	Minor (Vocational)	2	1	0	--	--	--	100	100	3:0:0	3	✓	✓	✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
6	Z020201T/ NS110	First Aid and Health	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓		✓		✓	✓		 3 GOOD HEALTH AND WELL-BEING	
PRACTICAL																						
7	B010202P/ PY116	Thermal Properties of Matter and Electronic Circuits-1	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
8	B010204P/ PY121	Thermal Properties of Matter and Electronic Circuits-2	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Total				21	4	8	90	60	150	650	800	23	23									



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

As per NEP-2020 Guidelines w.e.f. Session 2024-25

Second Year: Diploma in Physics (3rd Semester)

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
				L	T	P	CT	TA	CIE Total	ESE											
THEORY																					
1	B010301T/ PY207	Electromagnetic Theory and Modern Optics	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 
2	B010303T / PY211	Programming with Python	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 
3	I010301V/ ME261	Welding Science and Technology	Minor (Vocational)	2	1	0	---	---	---	100	100	3:0:0	3	✓		✓					 
4		Indian / Regional Language	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓					
PRACTICAL																					
5	B010302P/ PY208	Demonstrative Aspects of Electricity and Magnetism	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					 
6	B010304T / PY212	Python Programming Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					 
Total				14	3	8	75	50	125	475	600	17	17								



S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes								SDG
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010401T/ PY209	Perspectives of Modern Physics and Basic Electronics	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
2	B010403T / PY213	Mathematical Methods and Numerical Techniques	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
3	B030401T/ MT229 OR B020401T/ CH239 + B020402P/ CH241 OR B070401T/ CS275 + B070402P/ CS276	Choose any ONE from the Followings: (a) Differential Equations & Mechanics (T-6) OR (b) Quantum Mechanics and Analytical Techniques (T-4) + Instrumental Analysis (P-2) OR (c) Computer System Architecture (T-4) + Computer System Architecture Lab (P-2)	Minor (T + P)	5	1	0	15	10	25	75	100	6:0:0	6	✓		✓						
4	Z040401T/ PH201	Physical Education and Yoga	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓		
PRACTICAL																						
5	B010402P/ PY210	Basic Electronics Instrumentation	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
6	B010404P/ PY214	Numerical Techniques Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
7	B010405P/ PY215	Project	Major	0	0	6	---	---	25	75	100	0:0:3	3	✓		✓				✓		
Total				17	3	14	90	60	175	525	700	23	23									



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

As per NEP-2020 Guidelines w.e.f. Session 2024-25

Third Year: Degree in B.Sc.- Physics (5th Semester)

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes								SDG
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010501T/ PY311	Classical and Statistical Mechanics	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 	
2	B010502T/ PY312	Quantum Mechanics and Spectroscopy	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 	
3	B010504T/ PY318	Nanoscience and Nanotechnology	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 	
4	B010505T/ PY319	Biological Physics	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 	
PRACTICAL																						
5	B010503P/ PY313	Demonstrative Aspects of Optics and Lasers – 1	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					 	
6	B010506P/ PY313	Demonstrative Aspects of Optics and Lasers – 2	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					 	
7	B010507P/ PY323	Project	Major	0	0	4	---	---	25	75	100	0:0:5	5	✓		✓				✓	 	
Total				20	4	12	90	60	175	525	700	25	25									



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

As per NEP-2020 Guidelines w.e.f. Session 2024-25

Third Year: Degree in B.Sc. Honours in Physics (6th 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	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
2	B010602T/ PY315	Analog and Digital Principles and Applications	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
3	B010604T/ PY321	Quantum Computation	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
4	B010605T/ PY322	Atmospheric Physics	Major	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
PRACTICAL																						
5	B010603P/ PY316	Analog and Digital Circuits-1	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
6	B010606P/ PY320	Analog and Digital Circuits-2	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
7	B010607P/ PY324	Project	Major	0	0	4	---	---	25	75	100	0:0:5	5	✓		✓				✓		
Total				20	4	12	90	60	175	525	700	25	25									



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

As per NEP-2020 Guidelines w.e.f. Session 2024-25

Fourth Year: B.Sc. Honours in Physics (7th Semester)

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes							SDG	
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010701T/ PY413	Advanced Mathematical Physics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
2	B010702T/ PY414	Quantum Mechanics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
3	B010703T/ PY415	Classical Mechanics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
4	B010704T/ PY416	Statistical Mechanics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
PRACTICAL																						
5	B010705T/ PY417	Advanced Physics Lab - I	Major	0	0	4	15	10	25	75	100	0:0:4	4	✓		✓						
Total				12	4	4	75	50	125	375	500	20	20									



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

As per NEP-2020 Guidelines w.e.f. Session 2024-25

Fourth Year: B.Sc. Honours in Physics (8th Semester)

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes								SDG
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010801T/ PY418	Condensed Matter Physics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					4 QUALITY EDUCATION  9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	
2	B010802T/ PY419	Electrodynamics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					4 QUALITY EDUCATION  9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	
3	B010803T/ PY420	Nuclear and Particle Physics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					4 QUALITY EDUCATION  9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	
4	B010804T/ PY421	Solid State Electronics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					4 QUALITY EDUCATION  9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	
PRACTICAL																						
5	B010805P/ PY422	Advanced Physics Lab - II	Major	0	0	4	15	10	25	75	100	0:0:4	4	✓		✓					4 QUALITY EDUCATION  9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	
Total				14	4	4	75	50	125	375	500	20	20									



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

As per NEP-2020 Guidelines w.e.f. Session 2024-25

Fourth Year: B.Sc. Honours with Research in Physics (7th Semester)

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes								SDG
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010701T/ PY413	Advanced Mathematical Physics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 	
2	B010702T/ PY414	Quantum Mechanics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 	
3	B010703T/ PY415	Classical Mechanics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 	
4	B010704T/ PY416	Statistical Mechanics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 	
PRACTICAL																						
5	B010706P/ PY423	Project	Major	0	0	4	---	---	25	75	100	0:0:4	4	✓		✓					 	
Total				12	4	4	60	40	125	375	500	20	20									



Department of Physics

Study and Evaluation Scheme of Examination: B.Sc. Honours in Physics / B.Sc. Honours with Research in Physics

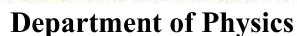
As per NEP-2020 Guidelines w.e.f. Session 2024-25

Fourth Year: B.Sc. Honours with Research in Physics (8th Semester)

S. No.	Course Code	Course Title	Type of Paper	Periods Per Week			Evaluation Scheme				Subject Total	Credit	Total Credit	Attributes								SDG
							CIE			UE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010801T/ PY418	Condensed Matter Physics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
2	B010802T/ PY419	Electrodynamics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
3	B010803T/ PY420	Nuclear and Particle Physics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
4	B010804T/ PY421	Solid State Electronics	Major	3	1	0	15	10	25	75	100	4:0:0	4	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
PRACTICAL																						
5	B010806P/ PY424	Project	Major	0	0	4	---	---	25	75	100	0:0:4	4	✓		✓					 4 QUALITY EDUCATION	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Total				12	4	4	60	40	125	375	500	20	20									

Certificate in Science (Physics and Major 2)
Year: First / Semester: First (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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010101T/ PY113	Mathematical Physics and Newtonian Mechanics	Major-1	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
2	B030101T/ MT136	Differential Calculus and Integral Calculus	Major-2*	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
3	B020101T/ CH134	Fundamentals of Chemistry		5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
4	B070101T/ CS127	Problem Solving using Computer		5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
5	B140101T/ EC131	Basic Circuit Theory and Network Analysis		5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
6	A050101T/ HM101	Rashtra Gaurav	Audit Course	2	0	0	--	--	--	100	100	0:0:0	0	✓		✓				✓		
7	I010101V/ PY117	Electrician	Minor (Vocational)	2	1	0	--	--	--	100	100	3:0:0	3	✓	✓	✓						
8	Z010101T/ BE105	Food, Nutrition and Hygiene	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓		✓		✓	✓			
PRACTICAL																						
9	B010102P/ PY114	Mechanical Properties of Matter	Major-1	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
10	B030102P/ MT137	Practical to be done using Mathematica/MATLAB	Major-2*	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
11	B020102P/ CH134	Quantitative Analysis		0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
12	B070102P/ CS128	Software Lab using Python		0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
13	B140102P/ EC132	Circuits and Networks Lab		0	0	4	15	10	25	75	100	0:0:2	2	✓	✓	✓						
Total				16	3	8	75	60	150	550	700	17	17									



Certificate in Science (Physics and Major 2)

Year: First / Semester: Second (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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010201T/ PY115	Thermal Physics and Semiconductor Devices	Major-1	5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
2	B030201T/ MT138	Matrices and Differential Equations and Geometry	Major-2*	5	1	0	15	10	25	75	100	6:0:0	6	✓		✓						
3	B020201T/ CH141	Bio organic and Medicinal Chemistry		5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
4	B070201T/ CS129	Database Management Systems		5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
5	B140201T/ EC133	Semiconductor Devices and Electronic Circuits		5	1	0	15	10	25	75	100	4:0:0	4	✓		✓						
6	B150210T/ ES143/ ME131	Environmental Education and Sustainable Management / Fundamentals of Mechanical Engineering	Minor (Elective)	5	1	0	15	10	25	75	100	6:0:0	6	✓		✓		✓	✓			
7	I010201V/ ME161	Refrigeration and Air-conditioning	Minor (Vocational)	2	1	0	--	--	--	100	100	3:0:0	3	✓	✓	✓						
8	Z020201/ NS110	First Aid and Health	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓		✓		✓	✓	✓		
9	B010205/ PY118	Artificial Intelligence and Physics	Audit Course	2	0	0	--	--	--	100	100	0:0:0	0	✓		✓						
PRACTICAL																						
10	B010202P/ PY116	Thermal Properties of Matter and Electronic Circuits	Major-1	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
11	B020202P/ CH141	Biochemical Analysis	Major-2*	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
12	B070202P/ CS130	Database Management Systems Lab		0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
13	B140202P/ EC134	Semiconductor devices and Circuits Lab		0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
Total				21	4	8	90	60	150	650	800	23	23									



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 2023-24

Diploma in Science (Physics, Mathematics & Electronics)

Year: Second / Semester: Third (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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010301T/ PY207	Electromagnetic Theory and Modern Optics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓								
2	B030301T/ MT228	Algebra and Mathematical Methods	Major	6	0	0	15	10	25	75	100	6:0:0	6	✓		✓						
3	B140301T/ EC291	Analog Electronics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓								
4	I010301V/ ME261	Welding Science and Technology	Minor (Vocational)	3	0	0	-	-	-	100	100	3:0:0	3	✓		✓						
5	Z030301/ ES225	Human Values and Environment studies	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓		
PRACTICAL																						
6	B010302P/ PY208	Demonstrative Aspects of Electricity and Magnetism	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
7	B140302P/ EC292	Analog Electronics Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
Total				19	0	8	90	60	150	550	700	23	23									



Year: Second / Semester: Fourth (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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
THEORY																						
1	B010401T/ PY209	Perspectives of Modern Physics And Basic Electronics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓								
2	B030401T/ MT229	Differential Equation and Mechanics	Major	6	0	0	15	10	25	75	100	6:0:0	6	✓		✓						
3	B140401T/ EC293	Digital Electronics	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓								
4	(A040405T/ LN234)/ (F010404TA/ BM292)/ ME262	Essential Professional Communication/ Entrepreneurship Development/ Workshop Practice and Basic Manufacturing Processes	Minor (Elective)	3	1	0	15	10	25	75	100	4:0:0	4	✓	✓	✓				✓	✓	 
5	I010401V/ ME263	Computer Aided Machine Drawing and Computer Graphics	Minor (Vocational)	3	0	0	-	-	-	100	100	3:0:0	3	✓		✓						
6	Z040401/ PH201	Physical Education and Yoga	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓		
PRACTICAL																						
7	B010402P/ PY210	Basic Electronics Instrumentation	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
8	B140402P/ EC294	Digital Electronics Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓						
Total				22	1	8	105	70	175	625	800	27	27									



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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
				L	T	P	CT	TA	CIE Total	ESE											
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	B010504R/ 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								

**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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
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/ LN340	Communication Skills and Personality Development	Minor (Co-Curricular)	2	0	0	15	10	25	75	100	2:0:0	2	✓	✓	✓		✓	✓	✓		
PRACTICAL																						
6	B010603P/ PY317	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	B010604R/ PY318	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									



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 & 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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
				L	T	P	CT	TA	CIE Total	ESE											
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/ 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	B140503P/ EC393	Antenna and Microprocessor Lab	Major	0	0	4	15	10	25	75	100	0:0:2	2	✓		✓					
8	B010504R/ 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								



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 (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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics	
				L	T	P	CT	TA	CIE Total	ESE											
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/MT337	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	B140504R/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								



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				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment and Sustainability	Human Values	Professional Ethics		
				L	T	P	CT	TA	CIE Total	ESE												
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 Circuit	Major	4	0	0	15	10	25	75	100	4:0:0	4	✓		✓				 		
5	Z060601/LN340	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	B140604R/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									