

FYUGP COURSE STRUCTURE
(INTRODUCED IN 2023)
(PHYSICS)

MAJOR DISCIPLINE: PHYSICS (NEP)
 Semester I - II

SEM	PAPER CODE	COURSE PAPER
SEM-I	UPHYMAJ 11001	Mathematical Physics-I
SEM-II	UPHYMAJ 12002	Mechanics -I
SEM-I	UPHYSEC 11001	Basic Electrical Circuits and Measurements
SEM-II	UPHYSEC 12002	Renewable Energy and Energy Harvesting

MINOR DISCIPLINE: PHYSICS (NEP)
 Semester I – II

SEM	PAPER CODE	COURSE PAPER
SEM-I	UPHYMIN 10001	Mechanics
SEM-II	UPHYMIN 20002	Mechanics

MULTIDISCIPLINARY COURSE (NEP)
 Semester II

SEM	PAPER CODE	COURSE PAPER
SEM-II	UPHYMDC 10001/10002	Introduction to Astronomy

COURSE STRUCTURE
B.Sc. PROGRAM COURSE IN PHYSICS
(CBCS)
(INTRODUCED IN 2018)

Course Type	TOTAL PAPER	CREDIT	
		THEORY+PRACTICAL	THEORY+TUTORIALS
Core Courses	12	12*4=48 12*2=24	12*5=60 12*1=12
Discipline Specific Electives	06	6*4=24 6*2=12	6*5=30 6*1=6
Ability Enhancement Language Courses	02	2*2=4	2*2=4
Skill Enhancement Courses	04	4*2=8	4*2=8
TOTAL CREDIT		120	120

Details of Semester wise distribution of courses

Semester	CORE COURSE (12)	Ability enhancement Compulsory Course (AECC) (2)	Skill Enhancement Course (SEC) (2)	Discipline Specific Elective DSE (6)
I	MECHANICS Theory & Lab DSC-2A DSC-3A	AECC-1 (English/MIL Communication)/ Environmental Science		
II	Electricity & Magnetism Theory & Lab DSC-2B DSC-3B	AECC-2 Environmental Science /(English/ MIL Communication)		
III	Thermal Physics and Statistical Mechanics Theory and Lab DSC-2C DSC-3C		SEC-1 Computational Physics/Electrical Circuits and Network (any one)	
IV	Waves and Optics Theory & Lab DSC-2D DSC-3D		SEC -2 Basic Instrumentation Skills/ Renewable Energy and Energy Harvesting (any one)	
V			SEC-3	DSE-1 A Elements of Modern Physics/Nuclear and Particle Physics (Theory) (any one) DSE-2 A DSE-3 A
VI			SEC-4	DSE-1 B Solid State Physics/Quantum Mechanics (Theory and Lab) (any one) DSE-2 B DSE-3 B

COURSE STRUCTURE
B.Sc. GENERAL COURSE IN PHYSICS (I+I+I)

B. Sc. Physics (General)

Course Structure.



Part – I	: Theory (90 marks)	: Paper – I	45 marks
		: Paper – II	45 marks
	: Practical	: Paper – III	60 marks
Part – II	: Theory (90 marks)	: Paper – IV	45 marks
		: Paper – V	45 marks
	: Practical	: Paper – VI	60 marks
Part – III	: Theory	: Paper – VII	60 marks
	: Practical	: Paper – VIII	40 marks

Outline of the contents of individual theoretical papers with approximate number of lectures.

Part – I	: Paper – I	: A. Mechanics and Oscillations (30)
		: B. General Properties of Matter (20)
		: C. Waves and Acoustics (15)
	: Paper – II	: A. Heat and Thermodynamics (25)
		: B. Optics (Geometrical and Physical) (25)
		: C. Magnetism (Magnetostatics) (15)
	: Paper – III	: Practical (Experiments on General Physics, Sound, Heat and Geometrical Optics).
Part – II	: Paper – IV	: A. Electrostatics (Including quadrant electrometer) (15)
		: B. Current electricity (DC & AC) (30)
		: C. Electronics – I (15)
	: Paper – V	: A. Special Theory of Relativity (15)
		: B. Atomic & Nuclear Physics (20)
		: C. Quantum Mechanics & Solid state Physics (25)
	: Paper – VI	: Practical (Expts. on Electricity, Magnetism & Electronics)
Part – III	: Paper – VII	: A. Electronics - II (30)
		: B. Machine & Energy Sources (30)
		: C. Communications and Computers (35 = 20 + 25)
	: Paper – VIII	: Practical (Expts. on Optics, Electronics and Computer).

* Students are to answer four questions in each theoretical paper taking not more than one question from any group.

(Each paper : C. Q – 9, Gr. A – 12, Gr. B – 12, Gr. C – 12

Total = 45)

