

Physics

(A) Major Core Courses

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	I	MJC-1(T)	Introduction to Classical Mechanics- I (T)	4	100
2.	I	MJC-1 (P)	Introduction to Classical Mechanics- I (P)	2	100
3.	II	MJC-2 (T)	Mathematical Physics-I with Waves & Oscillation (T)	4	100
4.	II	MJC-2 (P)	Mathematical Physics-I with Waves & Oscillation (P)	2	100
5.	III	MJC-3 (T)	Thermal Physics & Thermodynamics (T)	3	100
6.	III	MJC-3 (P)	Thermal Physics & Thermodynamics (P)	2	100
7.	III	MJC-4 (T)	Electricity & Magnetism (T)	3	100
8.	III	MJC-4 (P)	Electricity & Magnetism (P)	1	100
9.	IV	MJC-5 (T)	Mathematical Physics-II and Introduction to Computational Methods (T)	3	100
10	IV	MJC-5 (P)	Mathematical Physics-II and Introduction to Computational Methods (P)	2	100
11.	IV	MJC-6	Electrodynamics & Electromagnetism	5	100
12.	IV	MJC-7	Optics	5	100
13.	V	MJC-8	Elements of Modern Physics	5	100
14.	V	MJC-9 (T)	Basic Electronics (T)	3	100
15.	V	MJC-9 (P)	Basic Electronics (P)	2	100
16.	VI	MJC-10	Classical Mechanics-II & Special Theory of Relativity	4	100
17.	VI	MJC-11	Statistical Mechanics	5	100
18.	VI	MJC-12 (T)	Quantum Mechanics & its Application (T)	3	100
19.	VI	MJC-12 (P)	Quantum Mechanics & its Application (P)	2	100
20	VII	MJC-13 (T)	Atomic Spectroscopy & Physics of Nuclei (T)	3	100
21.	VII	MJC-13 (P)	Atomic Spectroscopy & Physics of Nuclei (P)	2	100
22.	VII	MJC-14	Research Methodology	5	100
23.	VII	MJC-15 (T)	Solid State Physics (T)	4	100
25.	VII	MJC-15 (P)	Solid State Physics (P)	2	100
26.	VIII	MJC-16 (T)	Physics of Molecules and Laser (T)	3	100
27.	VIII	MJC-16 (P)	Physics of Molecules and Laser (P)	1	100

Sub Total = 80

(B) Minor Courses to be offered by the Department for students of other Departments of Science

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	I	MIC-1	Introduction to Classical Mechanics- I	3	100
2.	II	MIC-2	Mathematical Physics-I with Waves & Oscillation	3	100
3.	III	MIC-3	Thermal Physics & Thermodynamics	3	100
4.	IV	MIC-4	Electricity & Magnetism	3	100
5.	V	MIC-5	Mathematical Physics-II and Introduction to Computational	3	100

			Methods		
6.	V	MIC-6	Electrodynamics & Electromagnetism	3	100
7.	VI	MIC-7	Optics	3	100
8.	VI	MIC-8	Elements of Modern Physics	3	100
9.	VII	MIC-9	Basic Electronics	4	100
10.	VI II	MIC-10	Classical Mechanics-II & Special Theory of Relativity	4	100

Sub Total = 32

Note: The Department may reduce the syllabus of the Minor Courses as per the credit distribution. The Department concerned may also decide practical courses.

(C) Multidisciplinary Courses to be offered

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	I	MDC-1	To be selected from the basket	3	100
2.	II	MDC-2	To be selected from the basket	3	100
3.	III	MDC-3	To be selected from the basket	3	100

Sub Total = 09

(D) Ability Enhancement Courses to be offered

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	I	AEC-1	MIL	2	100
2.	II	AEC-2	Environmental Science	2	100
3.	III	AEC-3	Disaster Risk Management	2	100
4.	IV	AEC-4	NCC/NSS/NGOs/Social Service/ Scout and Guide/Sports	2	100

Sub Total = 08

(E) Skill Enhancement Courses to be offered

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	I	SEC-1	To be selected from the basket	3	100
2.	II	SEC-2	To be selected from the basket	3	100
3.	III	SEC-3	To be selected from the basket	3	100

Sub Total = 09

(F) Value Added Courses to be offered

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	I	VAC-1	To be selected from the basket	3	100
2.	II	VAC-2	To be selected from the basket	3	100

Sub Total = 06

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	v	INT-1	Summer Internship	4	100

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	VIII	RP-1	Research/Dissertation	12	100

Grand Total = 160 Credits

(G) Basket for Multidisciplinary Courses (MDC)

To be decided by Respective Department

(H) Basket for Skill Enhancement Courses (SEC)

See at the end of structure (this booklet)

(I) Basket for Value Added Courses (VAC)

Course Structure common to all Programme

Semester-I

SINo.	Name ofCourse	Type ofCourse	L-T-P	Credit	Marks
1	Major Core 1	MJC-1	6-1-0	6	100
2	Minor Course 1	MIC-1	3-1-0	3	100
3	Multidisciplinary Course 1	MDC-1	3-1-0	3	100
4	MIL	AEC-1	2-1-0	2	100
5	Skill Enhancement Course	SEC-1	3-0-3	3	100
6	Value Added Course	VAC-1	3-0-3	3	100
TotalCredit- 20					

Semester-II

SINo.	Name ofCourse	Type ofCourse	L-T-P	Credit	Marks
1	Major Core 2	MJC-2	6-1-0	6	100
2	Minor Course 2	MIC-2	3-1-0	3	100
3	Multidisciplinary Course 2	MDC-2	3-1-0	3	100
4	Environmental Science	AEC-2	2-1-0	2	100
5	Skill Enhancement Course	SEC-2	3-1-0	3	100
6	Value Added Course	VAC-2	3-0-3	3	100
TotalCredit- 20					

Semester-III

SINo.	Name of Course	Type ofCourse	L-T-P	Credit	Marks
1	Major Core 3	MJC-3	5-1-0	5	100
2	Major Core 4	MJC-4	4-1-0	4	100
3	Minor Course 3	MIC-3	3-1-0	3	100
4	Multidisciplinary Course 3	MDC-3	3-1-0	3	100
5	Ability Enhancing Course (Course on Disaster Risk Management)	AEC-3	2-1-0	2	100
6	Skill Enhancement Course	SEC-3	3-1-0	3	100
Total Credit- 20					

Semester-IV

SINo.	Name ofCourse	Type ofCourse	L-T-P	Credit	Marks
1	Major Core 5	MJC-5	5-1-0	5	100
2	Major Core 6	MJC-6	5-1-0	5	100
3	Major Core 7	MJC-7	5-1-0	5	100
4	Minor Course 4	MIC-4	3-1-0	3	100

5	Ability Enhancing Course (Course on NCC/NSS, NGOs/Social Service/Scout & Guide/Sports)	AEC-4	2-1-0	2	100
TotalCredit- 20					

Semester –V

SINo.	Name ofCourse	Type ofCourse	L-T-P	Credit	Marks
1	Major Core 8	MJC-8	5-1-0	5	100
2	Major Core 9	MJC-9	5-1-0	5	100
3	Minor Course 5	MIC-5	3-1-0	3	100
4	Minor Course 6	MIC-6	3-1-0	3	100
5	Internship	INT-1	-	4	100
TotalCredit- 20					

Semester–VI

SINo.	Name ofCourse	Type ofCourse	L-T-P	Credit	Marks
1	Major Core 10	MJC-10	4-1-0	4	100
2	Major Core 11	MJC-11	5-1-0	5	100
3	Major Core 12	MJC-12	5-1-0	5	100
4	Minor Course 7	MIC-7	3-1-0	3	100
5	Minor Course 8	MIC-8	3-1-0	3	100
TotalCredit- 20					

Semester–VII

SINo.	Name ofCourse	Type ofCourse	L-T-P	Credit	Marks
1	Major Core 13	MJC-13	5-1-0	5	100
2	Major Core 14	MJC-14	5-1-0	5	100
3	Major Core 15	MJC-15	6-1-0	6	100
4	Minor Course 9	MIC-9	4-1-0	4	100
TotalCredit- 20					

Semester–VIII

SINo.	Name ofCourse	Type ofCourse	L-T-P	Credit	Marks
1	Major Core 16	MJC-16	4-1-0	4	100
2	Minor Course 10	MIC-10	4-1-0	4	100
3	Research Project /Dissertation	RP-1	-	12	
TotalCredit- 20					

- **Subject / Courses having 6, 5 & 4 credits may be split into theory and Practical where ever required with following credit and LTP.**

- For 6 Credit Course / Subject –**
 - Theory – 4-1-0, 4 Credit, 100 Marks**
 - Practical 0-0-4, 2 Credit, 100 Marks**
- For 5 Credit Course / Subject –**
 - Theory – 3-1-0, 3 Credit, 100 Marks**
 - Practical 0-0-4, 2 Credit, 100 Marks**
- For 4 Credit Course / Subject –**
 - Theory – 3-1-0, 3 Credit, 100 Marks**
 - Practical 0-0-2, 1 Credit, 100 Marks**

Abbreviation:

LTP: Lecture/Tutorial/Practical (number of classes per week)

MIL: Modern Indian

Type of the Course

Name of the Course

Credit

MJC :	Major Core Course	80
MIC :	Minor Core Course	32
MDC :	Multidisciplinary Course	09
AEC :	Ability Enhancement Course	08
SEC :	Skill Enhancement Course	09
VAC :	Value Added Course	06
INT :	Summer Internship	04
RP :	Research Project /Dissertation	12

Total= 160