Department of Physics

Pavanatma College, Murickassery

Idukki-685604

Curriculum Implementation Plan

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Course – I Semester – I

Methodology And Perspectives Of Physics

1.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH1CRT01
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

1.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Concepts and Development Physics	Chalk and talk, ICT	8	4
2	Number systems-Introductory Vector Analysis-Coordinate systems	Chalk and talk	18	9
3	Experimental methods and error analysis	Chalk and talk	10	5

1.3 Continuous Evaluation Schedule

1.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

1.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

1.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – II Semester – II

Mechanics And Properties Of Matter

2.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH2CRT02
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

2.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Wave motion-Oscillations	Chalk and talk	12	6
2	Rotational mechanics	Chalk and talk	7	4
3	Elasticity-Hydrodynamics	Chalk and talk	17	9

2.3 Continuous Evaluation Schedule

2.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

2.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

2.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – III Semester – III

Optics, Laser And Fiber Optics

3.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH3CRT03
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

3.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Interference	Chalk and talk, ICT	13	5
2	Diffraction- Polarization	Chalk and talk ,ICT	22	8
3	Laser- Fiber Optics	Chalk and talk	19	7

3.3 Continuous Evaluation Schedule

3.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

3.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

3.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – IV Semester – IV

Semiconductor Physics

4.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH4CRT04
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

4.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Semiconducting diodes and applications	Chalk and talk, ICT	14	5
2	Transistors Configurations and Feed back- Amplifiers and Oscillators	Chalk and talk, ICT	24	8
3	FET, Operational Amplifier and Modulation	Chalk and talk, ICT	16	6

4.3 Continuous Evaluation Schedule

4.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

4.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

4.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – V Semester – V

Electricity And Electrodynamics

5.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH5CRT05
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

5.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Alternating Current and Network Theorems	Chalk and talk	15	5
2	Transient Current and Thermo electricity	Chalk and talk	8	3
3	Electrostatics and Magnetostatics	Chalk and talk	20	7
4	Maxwell's Equations and Electromagnetic wave propagation	Chalk and talk	11	4

5.3 Continuous Evaluation Schedule

5.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

5.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

5.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – VI Semester – V

Classical And Quantum Mechanics

6.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH5CRT06
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

6.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Lagrangian and Hamiltonian Formulations of Classical Mechanics	Chalk and talk	15	5
2	Historical development and origin of quantum theory- General Formalism of Quantum Mechanics	Chalk and talk	24	8
3	Schrodinger equation and its applications	Chalk and talk	15	5

6.3 Continuous Evaluation Schedule

6.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

6.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

6.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – VII Semester – V

Digital Electronics And Programming

7.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH5CRT07
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

7.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Boolean algebra and logic gates	Chalk and talk	9	3
2	Combinational logic-Sequential logic	Chalk and talk	19	7
3	Programming in C++	Chalk and talk	26	9

7.3 Continuous Evaluation Schedule

7.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

7.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

7.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – VIII Semester – V

Environmental Physics And Human Rights

8.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH5CRT08
4	Credit	4
5	Duration of External Examination	3 hours
6	External Assessment	80
7	Internal Assessment	20
8	Total hours	72
9	Hours per Week	4
10	Number of Modules	5
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	10 ($2 \times 5 = 10$)

8.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Water Resources and Its Management- Remote sensing- Environmental Pollution	Chalk and talk	15	4
2	Waste Management- Environment Impact Assessment and Control	Chalk and talk, ICT	12	3
3	Non-renewable and Renewable Energy Sources	Chalk and talk, ICT	13	4
4	Solar energy	Chalk and talk, ICT	14	4
5	Human Rights- - Human Rights and United Nations- Human Rights National Perspective	Chalk and talk, ICT	18	5

8.3 Continuous Evaluation Schedule

8.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	80	3 Hours	Model Examination

8.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

8.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – IX Semester – V

Our Universe

9.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH5OPT01
4	Credit	4
5	Duration of External Examination	3 hours
6	External Assessment	80
7	Internal Assessment	20
8	Total hours	72
9	Hours per Week	4
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	10 (2 × 5 = 10)

9.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Our universe	Chalk and talk, ICT	10	3
2	Cosmology	Chalk and talk, ICT	14	4
3	Observational Astronomy	Chalk and talk, ICT	24	6
4	Solar system	Chalk and talk, ICT	24	6

9.3 Continuous Evaluation Schedule

9.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	80	3 Hours	Model Examination

9.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

9.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – X Semester – VI

Thermal And Statistical Physics

10.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH6CRT09
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

10.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Equation of state for gases- Zeroth law of thermodynamics- First laws of thermodynamics- Heat engines and second law of thermodynamics	Chalk and talk	21	7
2	Entropy- Thermodynamic relations- Conduction and radiation	Chalk and talk	17	6
3	Statistical mechanics- Statistical distributions	Chalk and talk	16	6

10.3 Continuous Evaluation Schedule

10.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

10.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

10.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – XI Semester – VI

Relativity And Spectroscopy

11.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH6CRT10
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	72
9	Hours per Week	4
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

11.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Special Theory of Relativity	Chalk and talk	18	5
2	Atomic Spectroscopy	Chalk and talk, ICT	21	6
3	Molecular Spectroscopy- NMR and ESR Spectroscopy	Chalk and talk, ICT	33	9

11.3 Continuous Evaluation Schedule

11.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

11.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

11.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – XII Semester – VI

Nuclear, Particle Physics And Astrophysics

12.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH6CRT11
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

12.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Nuclear structure- Nuclear Radiation Detectors, Counters and Particle Accelerators	Chalk and talk	18	6
2	Nuclear Transformations- Cosmic rays	Chalk and talk	19	7
3	Particle Physics- Astrophysics	Chalk and talk	17	6

12.3 Continuous Evaluation Schedule

12.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

12.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

12.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – XIII Semester – VI

Solid State Physics

13.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH6CRT12
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	4
10	Number of Modules	3
11	Total Week to complete	17
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

13.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Crystal structure	Chalk and talk	18	5
2	Bonding in solids- Free electron theory and elementary band theory- Semiconducting properties of materials	Chalk and talk	31	8
3	Dielectric properties of materials- Magnetic properties of materials- Superconductivity	Chalk and talk	22	6

13.3 Continuous Evaluation Schedule

13.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	5	20	1 Hours	Assessment Test
2	11	20	1 Hours	Assessment Test
3	17	60	3 Hours	Model Examination

13.3.2 Assignments

No.	Week	Duration	Assignments type
1	5	1 Week	Problem solving
2	11	1 Week	Problem solving
3	17	1 Week	Problem solving

13.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	5	3	20 Minute	Lecture
2	11	3	20 Minute	Lecture
3	17	3	20 Minute	Lecture

Course – XIV Semester – VI

Material Science

14.1 Course Overview

1	Course	Core
2	Course Type	Theory
3	Course Code	PH6CBT02
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

14.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Structure and Properties of Materials	Chalk and talk	18	6
2	Optical Properties of Materials- Modern Engineering Materials	Chalk and talk	18	6
3	Nanoscience- Material Characterization Techniques	Chalk and talk	18	6

14.3 Continuous Evaluation Schedule

14.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

14.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

14.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – I Semester – I & II

Mechanics And Properties Of Matter(P)

15.1 Course Overview

1	Course	Core
2	Course Type	Practical
3	Course Code	PH2CRP01
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	40
7	Internal Assessment	10
8	Total hours	72
9	Hours per Week	2
10	Number of Experiments	15
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)

Course – II Semester – III & IV

Optics and Semiconductor Physics(P)

16.1 Course Overview

1	Course	Core
2	Course Type	Practical
3	Course Code	PH4CRP02
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	40
7	Internal Assessment	10
8	Total hours	72
9	Hours per Week	2
10	Number of Experiments	15
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)

Course – III Semester – V & VI

Electricity, Magnetism and LASER(P)

17.1 Course Overview

1	Course	Core
2	Course Type	Practical
3	Course Code	PH6CRP03
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	40
7	Internal Assessment	10
8	Total hours	72
9	Hours per Week	2
10	Number of Experiments	15
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)

Course – IV Semester – V & VI

Digital Electronics(P)

18.1 Course Overview

1	Course	Core
2	Course Type	Practical
3	Course Code	PH6CRP04
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	40
7	Internal Assessment	10
8	Total hours	72
9	Hours per Week	2
10	Number of Experiments	15
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)

Course – V Semester – V & VI

Thermal Physics, Spectroscopy and C++ Programming(P)

19.1 Course Overview

1	Course	Core
2	Course Type	Practical
3	Course Code	PH6CRP05
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	40
7	Internal Assessment	10
8	Total hours	72
9	Hours per Week	2
10	Number of Experiments	15
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)

Course – VI Semester – V & VI

Acoustics, Photonics and Advanced Semiconductor Physics(P)

20.1 Course Overview

1	Course	Core
2	Course Type	Practical
3	Course Code	PH6CRP06
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	40
7	Internal Assessment	10
8	Total hours	72
9	Hours per Week	2
10	Number of Experiments	15
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)

Course – I Semester – I

Properties of matter and Thermodynamics

21.1 Course Overview

1	Course	Complementary
2	Course Type	Theory
3	Course Code	PH1CMT02
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 ($2 \times 4 = 8$)

21.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Elasticity	Chalk and talk	13	7
2	Surface tension - Hydrodynamics	Chalk and talk	10	5
3	Thermodynamics	Chalk and talk	13	7

21.3 Continuous Evaluation Schedule

21.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

21.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

21.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – II Semester – II

Mechanics and Superconductivity

22.1 Course Overview

1	Course	Complementary
2	Course Type	Theory
3	Course Code	PH2CMT02
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

22.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Motion under gravity-Rotational dynamics	Chalk and talk	15	8
2	Ocillations, Waves	Chalk and talk	13	7
3	Superconductivity	Chalk and talk	8	4

22.3 Continuous Evaluation Schedule

22.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

22.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

22.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – III Semester – III

Modern Physics and magnetism

23.1 Course Overview

1	Course	Complementary
2	Course Type	Theory
3	Course Code	PH3CMT02
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

23.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Modern Physics	Chalk and talk	18	6
2	Quantum Mechanics-Spectroscopy	Chalk and talk	18	6
3	Electronics	Chalk and talk	8	3
4	Magnetism	Chalk and talk	10	4

23.3 Continuous Evaluation Schedule

23.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

23.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

23.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – IV Semester – IV

Optics and solid state Physics

24.1 Course Overview

1	Course	Complementary
2	Course Type	Theory
3	Course Code	PH4CMT02
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

24.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Interference, diffraction and Polarization	Chalk and talk	22	8
2	laser and fiber optics	Chalk and talk	10	4
3	Dielectrics	Chalk and talk	10	4
4	Crystallography	Chalk and talk	12	4

24.3 Continuous Evaluation Schedule

24.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

24.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

24.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – I Semester – I & II

Complimentary Physics Practical I(P)

25.1 Course Overview

1	Course	Complementary
2	Course Type	Practical
3	Course Code	PH2CMP02
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	40
7	Internal Assessment	10
8	Total hours	144
9	Hours per Week	2
10	Number of Experiments	15
11	Total Week to complete	39
Distribution of Internal Marks		
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)

Course – II Semester – III & IV

Complimentary Physics Practical II(P)

26.1 Course Overview

1	Course	Complementary
2	Course Type	Practical
3	Course Code	PH4CMP02
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	40
7	Internal Assessment	10
8	Total hours	144
9	Hours per Week	2
10	Number of Experiments	15
11	Total Week to complete	39
Distribution of Internal Marks		
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)