# Department of Physics Pavanatma College, Murickassery Idukki-685604

### **Curriculum Implementation Plan**



### **Table of Contents**

1	Met	thodology And Perspectives Of Physics	1
	1.1	Course Overview	1
	1.2	Implementation Schedule	2
	1.3	Continuous Evaluation Schedule	2
		1.3.1 Test paper	2
		1.3.2 Assignments	3
		1.3.3 Seminar	3
2	Med	chanics And Properties Of Matter	4
	2.1	Course Overview	4
	2.2	Implementation Schedule	5
	2.3	Continuous Evaluation Schedule	5
		2.3.1 Test paper	5
		2.3.2 Assignments	5
		2.3.3 Seminar	6
3	Opt	tics, Laser And Fiber Optics	7
	3.1	Course Overview	7
	3.2	Implementation Schedule	8
	3.3	Continuous Evaluation Schedule	8

		3.3.1 Test paper	8
		3.3.2 Assignments	8
		3.3.3 Seminar	9
4	Sen	niconductor Physics	10
	4.1	Course Overview	10
	4.2	Implementation Schedule	11
	4.3	Continuous Evaluation Schedule	11
		4.3.1 Test paper	11
		4.3.2 Assignments	11
		4.3.3 Seminar	12
5	Ele		10
	5.1	Course Overview	13
	5.2	Implementation Schedule	14
	5.3	Continuous Evaluation Schedule	14
		5.3.1 Test paper	14
		5.3.2 Assignments	15
		5.3.3 Seminar	15
6	Cla	ssical And Quantum Mechanics	16
	6.1	Course Overview	16
	6.2	Implementation Schedule	17
	6.3	Continuous Evaluation Schedule	17
		6.3.1 Test paper	17
		6.3.2 Assignments	18
		6.3.3 Seminar	
7	Dig	ital Electronics And Programming	19
	7.1	Course Overview	19
	7.2		20

	7.3	Continuous Evaluation Schedule	20
		7.3.1 Test paper	20
		7.3.2 Assignments	20
		7.3.3 Seminar	21
8	Env	rironmental Physics And Human Rights	22
	8.1	Course Overview	22
	8.2	Implementation Schedule	
	8.3	Continuous Evaluation Schedule	24
		8.3.1 Test paper	
		8.3.2 Assignments	24
		8.3.3 Seminar	24
9	Our	Universe	<b>25</b>
ð	9.1		<ul><li>25</li></ul>
	9.1		<sup>25</sup>
	9.2		<ul><li>26</li><li>26</li></ul>
	9.0	9.3.1 Test paper	
		9.3.2 Assignments	
			27
		J.J.J. Selililar	41
10		rmal And Statistical Physics	<b>28</b>
	10.1	Course Overview	28
		Implementation Schedule	29
	10.3	NO RICKASSES	29
		10.3.1 Test paper	29
		10.3.2 Assignments	30
		10.3.3 Seminar	30
11	Rela	ativity And Spectroscopy	31
	11.1	Course Overview	31

	11.2	Implementation Schedule	32
	11.3	Continuous Evaluation Schedule	32
		11.3.1 Test paper	32
		11.3.2 Assignments	32
		11.3.3 Seminar	33
10	<b>N</b> T1	Lean Deuthala Dharatan Anal Antara baratan	0.4
		lear, Particle Physics And Astrophysics	34
	12.1	Course Overview	34
		Continuous Evaluation Schedule	
		12.3.1 Test paper	35
		12.3.2 Assignments	36
		12.3.3 Seminar	36
10	a 1:		0=
		d State Physics	<b>37</b>
		Course Overview	
		Implementation Schedule	
	13.3	Continuous Evaluation Schedule	38
		13.3.1 Test paper	38
		13.3.2 Assignments	
		13.3.3 Seminar	39
		erial Science	<b>40</b>
		Course Overview	
	14.2	Implementation Schedule	41
	14.3	Continuous Evaluation Schedule	41
		14.3.1 Test paper	41
		14.3.2 Assignments	42
		14.3.3 Seminar	42

<b>15</b>	Mechanics And Properties Of Matter(P)	<b>43</b>
	15.1 Course Overview	43
<b>16</b>	Optics and Semiconductor Physics(P)	44
	16.1 Course Overview	44
<b>17</b>	Electricity, Magnetism and LASER(P)	45
	17.1 Course Overview	45
18	Digital Electronics(P)	46
	18.1 Course Overview	46
<b>19</b>	Thermal Physics, Spectroscopy and C++ Programming(P)	47
	19.1 Course Overview	47
<b>20</b>	Acoustics, Photonics and Advanced Semiconductor Physics(P)	48
	20.1 Course Overview	48
<b>21</b>	Properties of matter and Thermodynamics	49
	21.1 Course Overview	49
	21.2 Implementation Schedule	50
	21.3 Continuous Evaluation Schedule	50
	21.3.1 Test paper	50
	21.3.2 Assignments	50
	21.3.3 Seminar	51
<b>22</b>	Mechanics and Superconductivity	<b>52</b>
	22.1 Course Overview	52
	22.2 Implementation Schedule	53
	22.3 Continuous Evaluation Schedule	53
	22.3.1 Test paper	53
	22.3.2 Assignments	53

22.3.3 Seminar	54
23 Modern Physics and magnetism	55
23.1 Course Overview	. 55
23.2 Implementation Schedule	. 56
23.3 Continuous Evaluation Schedule	. 56
23.3.1 Test paper	. 56
23.3.2 Assignments	. 56
23.3.3 Seminar	. 57
24 Oction and malid state Discript	<b>5</b> 0
24 Optics and solid state Physics	58
24.1 Course Overview	
24.2 Implementation Schedule	. 59
24.3 Continuous Evaluation Schedule	. 59
24.3.1 Test paper	. 59
24.3.2 Assignments	. 59
24.3.3 Seminar	60
25 Complimentary Physics Practical I(P)	61
25.1 Course Overview	61
26 Complimentary Physics Practical II(P)	62
26.1 Course Overview	62

### Course - I

### Semester - I

### **Methodology And Perspectives Of Physics**

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 Inter	rnal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	$8 (2 \times 4 = 8)$

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Concepts and Development Physics	Chalk and talk,	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	Time	Eworn tuno
No.	week	marks	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 Wee		Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

No	No. Week Number of		seminars Time duration	Delivery
110.	week	Number of seminars	Time duration	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**

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 Inter	rnal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	$8 (2 \times 4 = 8)$

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

NI.	Week Number of seminars		Ti	Delivery
No.	week	Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

### Course - III

### Semester – III

### **Optics, Laser And Fiber Optics**

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	$8 (2 \times 4 = 8)$				

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	22	8
3	Laser- Fiber Optics	Chalk and talk	19	7

### 3.3 Continuous Evaluation Schedule

### 3.3.1 Test paper

No.	Wools	Total	Time	Exam type
No.	Week ma	marks duration	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

N <sub>0</sub>	Week Number of seminar		Time duration	Delivery
No.	week	Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

### Course - IV

### Semester - IV

### **Semiconductor Physics**

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	$8 (2 \times 4 = 8)$				

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,	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	Time	Exam type
140.	Week	marks	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

NI.	W71-	icals Number of geniners	Time demotion	Delivery
No.	Week	Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

### **Electricity And Electrodynamics**

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 Inter	nal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	$8 (2 \times 4 = 8)$

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

N. W. d.		Total	Time	D
No.	Week	marks	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

No	Wool-	Number of seminars	Time demotion	Delivery
No.	o. Week Number of ser		inars Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

### **Classical And Quantum Mechanics**

1 Course Core	
	400
2 Course Type Theory	
3 Course Code PH5CRT	06
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	5
12 Attendance 5	
13 Assignment/Seminar 2	
14 Assessment Test $8 (2 \times 4 =$	8)

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

#### Assignments **6.3.2**

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 Sen	ninar	NAII	A COLL	EGE
				D

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

### **Digital Electronics And Programming**

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 Inter	nal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	$8 (2 \times 4 = 8)$

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Boolean algebra and logic	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	Time	Exam type
110.	Week	marks	duration	Exam by pc
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

NI.	Week Number of seminars	Ti	Delivery	
No. Week		Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

### Course - VIII

### Semester - V

### **Environmental Physics And Human Rights**

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 Inter	rnal Marks
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	$10 (2 \times 5 = 10)$

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,	12	3
3	Non-renewable and Renewable Energy Sources	Chalk and talk,	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,	18	5

### 8.3 Continuous Evaluation Schedule

### 8.3.1 Test paper

No.	Week	Total	Time	Exam type	
110.	WCCK	marks	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

No.	Week	Number of seminars	Time duration	Delivery
No.		Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	WUR3CKA	20 Minute	Lecture

### Course - IX

### Semester - V

### **Our Universe**

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 Inter	nal Marks
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	$10 (2 \times 5 = 10)$

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

### 9.3 Continuous Evaluation Schedule

### 9.3.1 Test paper

No.	Week	Total	Time	Exam type	
1,0.		marks	duration		
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

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

### Thermal And Statistical Physics

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

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	Time		
		marks	duration	Exam type	
1	7	20	1 Hours	Assessment Test	
2	14	20	1 Hours	Assessment Test	
3	21	60	3 Hours	Model Examination	

### Assignments 10.3.2

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 Se	minar	NAII	A COLL	S <sub>G</sub>
				D

No. Week		. Week Number of seminars		Delivery
		Number of seminars	Time duration	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**

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 Inter	nal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	$8(2 \times 4 = 8)$

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,	21	6
3	Molecular Spectroscopy-  NMR and ESR  Spectroscopy	Chalk and talk,	33	9

## 11.3 Continuous Evaluation Schedule

### 11.3.1 Test paper

No.	Week	Total	Time	Exam type
INO.	week	marks	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

No. Wool-		Week Number of sominous	Ti	Delivery
No.	Week	Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

## Course - XII

## Semester - VI

# Nuclear, Particle Physics And Astrophysics

1 Course Core 2 Course Type Theory 3 Course Code PH6CRT11	
3 Course Code PH6CRT11	
o Course Coue Triochtiii	
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 $8 (2 \times 4 = 8)$	

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	Exam type	
			duration		
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

No. Week		Number of seminars	Time duration	Delivery
		Number of seminars	Time duration	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**

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 Inter	rnal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

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

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

### Assignments 13.3.2

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 Se	minar	NAIN	A COLL	EGE

No	Week Number of seminars	Time a demotion	Delivery	
No.	week	Number of seminars	Time duration	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**

1CourseCore2Course TypeTheory	GA
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	
Number of Modules 3	
11 Total Week to complete 21	
Distribution of Internal Marks	
12 Attendance 5	
13 Assignment/Seminar 2	
14 Assessment Test $8 (2 \times 4 = 8)$	

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

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

# **Mechanics And Properties Of Matter(P)**

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)			

# **Optics and Semiconductor Physics(P)**

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

# **Electricity, Magnetism and LASER(P)**

Course	Core	
Course Type	Practical	
Course Code	PH6CRP03	
Credit	2	
Duration of External Examination	3 hours	
External Assessment	40	
Internal Assessment	10	
Total hours	72	
Hours per Week	2	
Number of Experiments	15	
Total Week to complete	21	
Distribution of Inter	nal Marks	
Attendance	2	
Record	4	
Assessment Test	4 (1 × 4 = 1)	
	Course Type Course Code Credit Duration of External Examination External Assessment Internal Assessment Total hours Hours per Week Number of Experiments Total Week to complete Distribution of Inter Attendance Record	

# Course - IV

# Semester - V & VI

# **Digital Electronics(P)**

Course	Core
Course Type	Practical
Course Code	PH6CRP04
Credit	2
Duration of External Examination	3 hours
External Assessment	40
Internal Assessment	10
Total hours	72
Hours per Week	2
Number of Experiments	15
Total Week to complete	21
Distribution of Inter	nal Marks
Attendance	2
Record	4
Assessment Test	4 (1 × 4 = 1)
	Course Type Course Code Credit Duration of External Examination External Assessment Internal Assessment Total hours Hours per Week Number of Experiments Total Week to complete  Distribution of Internal Attendance Record

## Semester - V & VI

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

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 Inter	rnal Marks
12	Attendance	2
13	Record	4
14	Assessment Test	4 (1 × 4 = 1)

## Semester - V & VI

# Acoustics, Photonics and Advanced Semiconductor Physics(P)

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 Inter	nal Marks	
12	Attendance	2	
13	Record	4	
14	Assessment Test	4 (1 × 4 = 1)	

# Course - I

## Semester - I

# Properties of matter and Thermodynam-

# ics

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 Inter	nal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

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	Time	Exam type	
110.	week marks				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

NI.	Week Number of gaminary Time duration		Delivery	
No.	Week	ek Number of seminars Time	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

# Course - II

## Semester – II

# **Mechanics and Superconductivity**

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 Inter	rnal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	$8 (2 \times 4 = 8)$

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	Time	Exam type	
110.	week	marks duration	marks duration	marks	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

N <sub>0</sub>	Wools	ek Number of seminars Time duration		Delivery
No.	Week	Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

# Course - III

## Semester – III

# **Modern Physics and magnetism**

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 Inter	rnal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

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	Time	Evon type
No.	week	marks	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

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No.	Week	Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

# Course - IV

## Semester - IV

# Optics and solid state Physics

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 Inter	rnal Marks
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	$8 (2 \times 4 = 8)$

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	Time	Evan type	
INO.	week	marks	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

NI.	W71-	N	Jumban of sominans Time demotion	
No.	Week	Number of seminars	Time duration	method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	MA <sub>3</sub> MA	20 Minute	Lecture

# **Complimentary Physics Practical I(P)**

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			
3 Course Code PH2CMP02 4 Credit 2 5 Duration of External Examination 3 hours			
4 Credit 2 5 Duration of External Examination 3 hours			
5 Duration of External Examination 3 hours			
C Fintennal American			
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 $4 (1 \times 4 = 1)$			

# **Complimentary Physics Practical II(P)**

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)	