



**Sri Adichunchanagiri First Grade College
Channarayapatna**

DEPARTMENT OF PHYSICS

LESSON PLAN FOR THE ACADEMIC YEAR 2022-23

Programme: B.Sc (NEP)

Course/Paper Name: Mechanics and Properties of Matter

Semester: I

Total Hours: 52

Sl. No.	Topic covered	No. of Lecture Hours	Methodology/pedagogy	Date
1	Units and measurements	13	Black board	1 st and 2 nd week
2	Momentum and Energy		Black board & Lecture PPT	2 nd and 3 rd week
3	Special Theory of Relativity		Black board & Lecture PPT	3 rd and 4 th week
4	Laws of Motion	13	Black board, Lecture PPT and Group Discussion	4 th and 5 th Week
5	Dynamics of Rigid bodies		Black board/ Lecture PPT	6 th week
6	Gravitation		Black board/Lecture PPT/Group Discussion	7 th and 8 th week
7	Elasticity	13	Black board, Group Discussion and Seminar	8 th and 9 th week
8	Surface Tension	13	Black board and Lecture PPT	9 th and 10 th week
9	Viscosity		Black board/Lecture PPT/Group Discussion	10 th and 13 th week
	Practical's-Paper I	4 hrs/week	Demonstration	1 experiment/week

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LESSON PLAN FOR THE ACADEMIC YEAR 2022-23

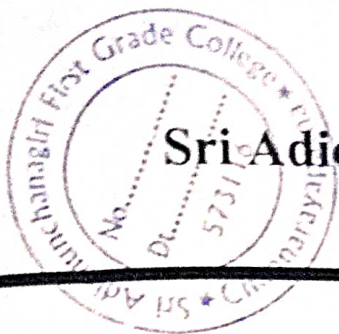
Programme: B.Sc (NEP)

Course/Paper Name: Electricity & Magnetism

Semester:II

Total Hours:64

Sl. No.	Topic covered	No. of Lecture Hours	Methodology/pedagogy	Date
1	Electric charge and field	3	Black board	1 st and 2 nd week
2	Gauss's law and its applications	3	Black board & Lecture PPT	3 rd week
3	Electric potential	7	Black board & Lecture PPT	3 rd and 4 th week
4	Conductors in electrostatic field	6	Black board, Lecture PPT and Group Discussion	4 th to 6 th Week
5	Electric currents and current density	7	Black board/ Lecture PPT	6 th to 8 th week
6	Magnetism	7	Black board/Lecture PPT/Group Discussion	8 th to 10 th week
7	Alternating current circuits	6	Black board, Group Discussion and Seminar	10 th and 11 th week
8	Electromagnetic waves	8	Black board and Lecture PPT	11 th to 13 th week
9	Types of magnetic materials	5	Black board and Lecture PPT	13 th and 14 th week
	Practical's-Paper I	4 hrs/week	Demonstration	1 experiment/week



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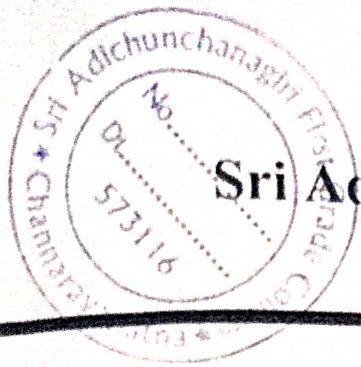
DEPARTMENT OF PHYSICS
LESSON PLAN FOR THE ACADEMIC YEAR 2022-23
Programme: B.Sc (NEP)

Course/Paper Name: Wave Motion and Optics

Semester:III

Total Hours:64

Sl. No.	Topic covered	No. of Lecture Hours	Methodology/pedagogy	Date
1	waves	5	Black board	1 st and 2 nd week
2	Superposition of harmonic waves	6	Black board & Lecture PPT	2 nd to 4 th week
3	Standing waves	8	Black board & Lecture PPT	4 th and 5 th week
4	Acoustics	3	Black board & Lecture PPT	6 th to 8 th week
5	Nature of light	4	Black board, Lecture PPT and Group Discussion	9 th Week
6	Interference of light by division of wavefront	4	Black board/ Lecture PPT	9 th to 11 th week
7	Interference of light by division of amplitude	6	Black board/Lecture PPT/Group Discussion	11 th to 13 th week
8	Fraunhofer diffraction	5	Black board, Group Discussion and Seminar	13 th and 14 th week
9	Fresnel diffraction	3	Black board and Lecture PPT	14 th and 15 th week
10	Polarisation	4	Black board, Group Discussion and Seminar	16 th and 17 th week
	Practical's-Paper I	4 hrs/week	Demonstration	1experiment/week



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LESSON PLAN FOR THE ACADEMIC YEAR 2022-23

Programme: B.Sc(NEP)

Course/Paper Name: Thermal Physics and Electronics

Semester: IV

Total Hours:64

Sl. No.	Topic covered	No. of Lecture Hours	Methodology/pedagogy	Date
1	Laws of thermodynamics	4	Black board	1 st and 2 nd week
2	Second law of thermodynamics	5	Black board & Lecture PPT	3 rd to 4 th week
3	Entropy	4	Black board & Lecture PPT	5 th to 7 th week
4	Thermodynamic potentials	3	Black board & Lecture PPT	7 th to 8 th week
5	Maxwell's thermodynamic relations	4	Black board, Lecture PPT and Group Discussion	9 th Week
6	Kinetic theory of gases	2	Black board/ Lecture PPT	9 th week
7	Radiation	4	Black board/Lecture PPT/Group Discussion	10 th week
8	Semiconductor device	7	Black board, Group Discussion and Seminar	11 th and 12 th week
9	Operational amplifier	6	Black board/Lecture PPT/Group Discussion	13 th week
10	Digital electronics	7	Black board/Lecture PPT/Group Discussion	14 th and 15 th week
11	Boolean Algebra theorems	6	Black board/Lecture PPT/Group Discussion	16 th week
	Practical's-Paper I	4 hrs/week	Demonstration	1experiment/week



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LESSON PLAN FOR THE ACADEMIC YEAR 2022-23

Programme: B.Sc

Course/Paper Name: Nuclear and Theoretical Physics

Semester: V

Total Hours: 64

Sl. No.	Topic covered	No. of Lecture Hours	Methodology/pedagogy	Date
1	Special theory of relativity	8	Black board	1 st and 2 nd week
2	Cosmic rays and particle physics	4	Black board & Lecture PPT	3 rd week
3	Mass spectrographs	2	Black board & Lecture PPT	4 th week
4	Bubble chamber	2	Black board & Lecture PPT	4 th week
5	The nucleus	2	Black board, Lecture PPT and Group Discussion	5 th Week
6	Radioactive decay	4	Black board/ Lecture PPT	5 th and 6 th week
7	Accelerators:	3	Black board/Lecture PPT/Group Discussion	6 th and 7 th week
8	Nuclear reactions	2	Black board, Group Discussion and Seminar	7 th week
9	Nuclear models	2	Black board & Lecture PPT	7 th and 8 th week
10	Nuclear fission, and fusion	3	Black board, Lecture PPT and Group Discussion	8 th week
11	Matter waves	7	Black board/ Lecture PPT	9 th and 10 th week
12	Schrodinger's equation	9	Black board & Lecture PPT	10 th to 12 th week



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LESSON PLAN FOR THE ACADEMIC YEAR 2022-23

Programme: B.Sc(CBCS)

Course/Paper Name: Lasers and Fibre Optics

Semester: V

Total Hours:32

Sl. No.	Topic covered	No. of Lecture Hours	Methodology/pedagogy	Date
1	Laser basics	5	Black board	1 st and 2 nd week
2	Laser oscillator	3	Black board & Lecture PPT	3 rd to 4 th week
3	Types of lasers	4	Black board & Lecture PPT	5 th to 7 th week
4	Laser diodes	4	Black board & Lecture PPT	7 th to 8 th week
5	Fibre optics and dielectric wave guides	3	Black board, Lecture PPT and Group Discussion	9 th Week
6	Optical fiber	4	Black board/ Lecture PPT	9 th to 11 th week
7	Index profile:	3	Black board/Lecture PPT/Group Discussion	12 th week
8	Energy losses in optical fibre:	6	Black board, Group Discussion and Seminar	13 th and 15 th week



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DEPARTMENT OF PHYSICS
LESSON PLAN FOR THE ACADEMIC YEAR 2022-23
Programme: B.Sc(CBCS)
Course/Paper Name: Solid State Physics

Semester:VI

Total Hours:64

Sl. No.	Topic covered	No. of Lecture Hours	Methodology/pedagogy	Date
1	Statistical physics	6	Black board	1 st and 2 nd week
2	Dielectric properties:	4	Black board & Lecture PPT	2 nd and 3 rd week
3	Thermal properties of solids:	2	Black board & Lecture PPT	3 rd week
4	Electrical properties of metals:	2	Black board & Lecture PPT	4 th week
5	Logic gates	2	Black board, Lecture PPT and Group Discussion	4 th and 5 th Week
6	Semiconductors	2	Black board/ Lecture PPT	5 th week
7	Semiconductor devices:	2	Black board/Lecture PPT/Group Discussion	6 th week
8	Transistors:	3	Black board, Group Discussion and Seminar	6 th and 7 th week
9	Amplifier:	6	Black board & Lecture PPT	7 th to 9 th week
10	Oscillators:	3	Black board, Lecture PPT and Group Discussion	9 th and 10 th week
11	Superconductivity:	4	Black board/ Lecture PPT	10 th and 11 th week
12	Liquid crystals:	2	Black board & Lecture PPT	11 th week
13	X-rays	10		12 th to 14 th week
	Practical's-Paper I	4 hrs/week	Demonstration	1 experiment/week



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DEPARTMENT OF PHYSICS
LESSON PLAN FOR THE ACADEMIC YEAR 2022-23
Programme: B.Sc(CBCS)
Course/Paper Name: Optoelectronics

Semester:VI

Total Hours:32

Sl. No.	Topic covered	No. of Lecture Hours	Methodology/pedagogy	Date
1	Optical process in a semiconductor:	4	Black board	1 st and 2 nd week
2	Optoelectronic devices:	10	Black board & Lecture PPT	3 rd to 7 th week
3	Organic optoelectronic devices	2	Black board & Lecture PPT	8 th week
4	Photo detectors:	10	Black board & Lecture PPT	9 th to 13 th week
5	Photovoltaic devices:	6	Black board, Lecture PPT and Group Discussion	13 th and 14 th Week