DEPARTMENT OF PHYSICS
Programme Specific Outcome Attainment Report
2024-2025 - ODD Semester
UNDERGRADUATE

PSO No.	Programme Specific Outcome
Physics (Batch:2022)	
PSOs	Upon completion of B.Sc. (Spl.) Physics programme, the students will be able to
PSO-1	be a lifelong learner in Physics
PSO-2	apply the scientific skills in problem solving in various branches of Physics
PSO-3	develop experimental, computational and programming skills through hands-on training
PSO-4	analyse, interpret and communicate Physics facts
PSO-5	identify, plan and execute interdisciplinary projects for the social sustainability process
Physics (Batch:2024)	
PSOs	Upon completion of B.Sc. Physics programme, the students will be able to
PSO-1	be a lifelong learner in Physics
PSO-2	apply the scientific skills in problem solving in various branches of Physics
PSO-3	develop experimental, computational and programming skills through hands-on training
PSO-4	analyse, interpret and communicate Physics facts
PSO-5	identify, plan and execute interdisciplinary projects for the social sustainability process
Physics (Batch:2023)	
PSOs	Upon completion of B.Sc. (Spl.) Physics programme, the students will be able to
PSO-1	be a lifelong learner in Physics
PSO-2	apply the scientific skills in problem solving in various branches of Physics
PSO-3	develop experimental, computational and programming skills through hands-on training

PSO-4	analyse, interpret and communicate Physics facts
PSO-5	identify, plan and execute interdisciplinary projects for the social sustainability process
Physics with Computer Applications (Batch:2022)	
PSOs	Upon completion of B.Sc. Physics with Computer Applications programme, the students will be able to
PSO-1	be a lifelong learner in Physics
PSO-2	apply the scientific skills in problem solving in various branches of Physics
PSO-3	develop experimental, computational and programming skills through hands-on training
PSO-4	analyse, interpret and communicate Physics facts
PSO-5	identify, plan and execute interdisciplinary projects for the social sustainability process
Physics with Computer Applications (Batch:2024)	
PSOs	Upon completion of B.Sc. Physics with Computer Applications programme, the students will be able to
PSO-1	be a lifelong learner in Physics
PSO-2	apply the scientific skills in problem solving in various branches of Physics
PSO-3	develop experimental, computational and programming skills through hands-on training
PSO-4	analyse, interpret and communicate Physics facts
PSO-5	identify, plan and execute interdisciplinary projects for the social sustainability process
Physics with Computer Applications (Batch:2023)	
PSOs	Upon completion of B.Sc. Physics with Computer Applications programme, the students will be able to
PSO-1	be a lifelong learner in Physics
PSO-2	apply the scientific skills in problem solving in various branches of Physics
PSO-3	develop experimental, computational and programming skills through hands-on training
PSO-4	analyse, interpret and communicate Physics facts
PSO-5	identify, plan and execute interdisciplinary projects for the social sustainability process

Course Code : PHE1321CM **Batch : 2024**

Course Title : PROPERTIES OF MATTER AND SOUND

Faculty Name(s) : Dr. ESTHER ELIZABETH GRACE C. & Dr. JANCI RANI JULIET A.R.S.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: apply Hooke's law to analyse the elasticity of a material	CO-1	3	3	2	2	2
CO-2: calculate Young's modulus for a given material	CO-2	3	3	2	3	2
CO-3: analyse the properties of fluid dynamics	CO-3	3	2	2	2	2
CO-4: recognize various types of vibrations and compute their frequencies	CO-4	3	2	2	2	2
CO-5: discuss the characteristics of acoustics and applications of ultrasonic waves	CO-5	3	2	2	3	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	52	1	0.6	56	1	0.4	1
CO2	78	3	1.8	63	2	0.8	2.6
CO3	100	3	1.8	67	2	0.8	2.6
CO4	59	1	0.6	26	0	0	0.6
CO5	100	3	1.8	29	0	0	1.8

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHE1321CM	Actual	1.72	1.73	1.72	1.8	1.72	The teaching methods adopted will be reconsidered to facilitate the students to understand the concept and to achieve the COs attainment
	Expected	3	2.4	2	2.4	2	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. ESTHER ELIZABETH GRACE C. & Dr. JANCI RANI JULIET A.R.S.

Signature of the Course Teacher

Course Code : PHE1421CM **Batch : 2024**

Course Title : ELECTRONICS

Faculty Name(s) : Ms. DIVYA A. & Ms. PRISCILLA G.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: discuss the fundamental concepts of Boolean algebra and use minimization techniques to solve and design circuits	CO-1	3	3	2	1	1
CO-2: describe the construction and working of various flip-flops and their applications	CO-2	3	2	2	3	2
CO-3: explain the principles of transistors, types of transistor biasing and amplifiers	CO-3	3	3	2	2	2
CO-4: identify the role of negative and positive feedback in amplifiers	CO-4	2	2	3	2	1
CO-5: recognise various memory devices, programmable logic devices and their functions	CO-5	3	1	1	3	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	67	2	1.2	77	3	1.2	2.4
CO2	100	3	1.8	41	0	0	1.8
CO3	100	3	1.8	26	0	0	1.8
CO4	96	3	1.8	22	0	0	1.8
CO5	78	3	1.8	37	0	0	1.8

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHE1421CM	Actual	1.93	1.96	1.92	1.85	1.88	Students find it challenging to revise the vast content. They were unable to answer questions that had already been asked in the CAs. To aid their preparation, practice tests will be conducted after completing the syllabus.
	Expected	2.8	2.2	2	2.2	1.6	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. DIVYA A. & Ms. PRISCILLA G.

Signature of the Course Teacher

Course Code : PHY1321CM **Batch : 2024**

Course Title : PROPERTIES OF MATTER AND SOUND

Faculty Name(s) : Ms. ANNIE POORNA S.R. & Dr. AROCKIA SHYAMALA PANIYARASI

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: relate the properties of material using different moduli of elasticity	CO-1	3	3	2	2	2
CO-2: describe the concept of bending of beams	CO-2	3	3	2	3	2
CO-3: explain the physics behind surface tension and viscosity of fluid	CO-3	3	2	2	2	2
CO-4: analyze waves and oscillations mathematically and solve problems	CO-4	3	2	2	2	2
CO-5: apply the knowledge of acoustics and ultrasonics in real time situations	CO-5	3	2	2	3	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	97	3	1.2	3
CO2	100	3	1.8	86	3	1.2	3
CO3	97	3	1.8	89	3	1.2	3
CO4	97	3	1.8	66	2	0.8	2.6
CO5	100	3	1.8	89	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY1321CM	Actual	2.92	2.93	2.92	2.93	2.92	COs attained
	Expected	3	2.4	2	2.4	2	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. ANNIE POORNA S.R. & Dr. AROCKIA SHYAMALA PANIYARASI

Signature of the Course Teacher

Course Code : PHY1421CM **Batch : 2024**

Course Title : HEAT AND THERMODYNAMICS

Faculty Name(s) : Dr. BINDU P.S., Mrs. PUSHPA SELVI M. & Ms. SANJU VIKASINI K.M.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: recognize the concept of specific heat capacity of gases and low temperature physics	CO-1	3	2	3	3	1
CO-2: explain the three modes of heat transfer conduction, convection and radiation	CO-2	3	3	3	3	1
CO-3: apply the first law of thermodynamics to various thermodynamic processes	CO-3	3	3	1	3	1
CO-4: relate the concepts of entropy and second law of thermodynamics to various heat engines	CO-4	3	3	1	3	1
CO-5: discuss various thermodynamical relations and understand the concept of third law of thermodynamics	CO-5	3	1	1	3	1

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	90	3	1.8	75	3	1.2	3
CO2	92	3	1.8	83	3	1.2	3
CO3	80	3	1.8	51	1	0.4	2.2
CO4	94	3	1.8	26	0	0	1.8
CO5	58	1	0.6	89	3	1.2	1.8

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY1421CM	Actual	2.36	2.4	2.64	2.36	2.36	More of problem solving, group discussion and peer learning can be adopted for teaching to help the freshers perform better
	Expected	3	2.4	1.8	3	1	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. BINDU P.S., Mrs. PUSHPA SELVI M. & Ms. SANJU VIKASINI K.M.

Signature of the Course Teacher

Course Code : PHY3205CP(1) **Batch : 2023**

Course Title : ELECTRONICS LAB - I

Faculty Name(s) : Mrs. PUSHPA SELVI M., Ms. SANJU VIKASINI K.M., Dr. SINTHIKA S. & Ms. VIJAYA LAKSHMI G

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify the tools and techniques to formulate the electronics experiments	CO-1	2	1	3	2	1
CO-2: setup experiments to study the applications of diodes, transistors and JFETs	CO-2	2	1	3	2	1
CO-3: develop the skills of observation, troubleshooting and data interpretation	CO-3	3	2	3	3	1
CO-4: analyse the data and their uncertainty using numerical and graphical methods	CO-4	2	3	2	3	1
CO-5: prepare a lab report with meaningful conclusion	CO-5	2	2	2	3	1

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=0 Marks	Attainment Level	Attainment of CO(0.6*)	%>=0 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	100	3	1.2	3
CO2	100	3	1.8	100	3	1.2	3
CO3	100	3	1.8	100	3	1.2	3
CO4	100	3	1.8	100	3	1.2	3
CO5	100	3	1.8	100	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3205CP(1)	Actual	3	3	3	3	3	Expected Course outcomes are attained
	Expected	2.2	1.8	2.6	2.6	1	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Mrs. PUSHPA SELVI M., Ms. SANJU VIKASINI K.M., Dr. SINTHIKA S. & Ms. VIJAYA LAKSHMI G

Signature of the Course Teacher

Course Code : PHY3205CP(2) **Batch : 2023**

Course Title : ELECTRONICS LAB - I

Faculty Name(s) : Ms. DIVYA A. & Dr. EZHIL ARASI S.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify the tools and techniques to formulate the electronics experiments	CO-1	2	1	3	2	1
CO-2: setup experiments to study the applications of diodes, transistors and JFETs	CO-2	2	1	3	2	1
CO-3: develop the skills of observation, troubleshooting and data interpretation	CO-3	3	2	3	3	1
CO-4: analyse the data and their uncertainty using numerical and graphical methods	CO-4	2	3	2	3	1
CO-5: prepare a lab report with meaningful conclusion	CO-5	2	2	2	3	1

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=0 Marks	Attainment Level	Attainment of CO(0.6*)	%>=0 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	100	3	1.2	3
CO2	100	3	1.8	100	3	1.2	3
CO3	100	3	1.8	100	3	1.2	3
CO4	100	3	1.8	100	3	1.2	3
CO5	100	3	1.8	100	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3205CP(2)	Actual	3	3	3	3	3	COs are attained as expected
	Expected	2.2	1.8	2.6	2.6	1	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. DIVYA A. & Dr. EZHIL ARASI S.

Signature of the Course Teacher

Course Code : PHY3206CP(1) **Batch : 2023**

Course Title : GENERAL LAB - II

Faculty Name(s) : Ms. ANNIE POORNA S.R., Dr. AROCKIA SHYAMALA PANIYARASI, Dr. BINDU P.S. & Dr. SINTHIKA S.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify the tools and techniques to formulate physics experiments	CO-1	3	3	1	2	2
CO-2: set up experiments to study the concepts in optics, mechanics, thermodynamics and electromagnetism	CO-2	3	2	3	3	2
CO-3: develop the skills of observation, troubleshooting and data interpretation	CO-3	3	3	3	3	3
CO-4: analyse the data and their uncertainty using numerical and graphical methods	CO-4	3	3	3	3	3
CO-5: prepare a lab report with meaningful conclusion	CO-5	3	2	1	3	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=0 Marks	Attainment Level	Attainment of CO(0.6*)	%>=0 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	100	3	1.2	3
CO2	100	3	1.8	100	3	1.2	3
CO3	100	3	1.8	100	3	1.2	3
CO4	100	3	1.8	100	3	1.2	3
CO5	100	3	1.8	100	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3206CP(1)	Actual	3	3	3	3	3	COs are attained
	Expected	3	2.6	2.2	2.8	2.4	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. ANNIE POORNA S.R., Dr. AROCKIA SHYAMALA PANIYARASI, Dr. BINDU P.S. & Dr. SINTHIKA S.

Signature of the Course Teacher

Course Code : PHY3206CP(2) **Batch : 2023**

Course Title : GENERAL LAB - II

Faculty Name(s) : Ms. ANTONY BLESSY E & Ms. PRISCILLA G.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify the tools and techniques to formulate physics experiments	CO-1	3	3	1	2	2
CO-2: set up experiments to study the concepts in optics, mechanics, thermodynamics and electromagnetism	CO-2	3	2	3	3	2
CO-3: develop the skills of observation, troubleshooting and data interpretation	CO-3	3	3	3	3	3
CO-4: analyse the data and their uncertainty using numerical and graphical methods	CO-4	3	3	3	3	3
CO-5: prepare a lab report with meaningful conclusion	CO-5	3	2	1	3	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=0 Marks	Attainment Level	Attainment of CO(0.6*)	%>=0 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	100	3	1.2	3
CO2	100	3	1.8	100	3	1.2	3
CO3	100	3	1.8	100	3	1.2	3
CO4	100	3	1.8	100	3	1.2	3
CO5	100	3	1.8	100	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3206CP(2)	Actual	3	3	3	3	3	COs are attained as expected
	Expected	3	2.6	2.2	2.8	2.4	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. ANTONY BLESSY E & Ms. PRISCILLA G.

Signature of the Course Teacher

Course Code : PHY3406CT(1) **Batch : 2023**

Course Title : INTRODUCTION TO PYTHON PROGRAMMING

Faculty Name(s) : Dr. NIMMA ELIZABETH R., Mrs. PUSHPA SELVI M. & Ms. SANJU VIKASINI K.M.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify the appropriate data types for solving scientific problems	CO-1	3	1	3	1	1
CO-2: construct Python programs using control statements	CO-2	1	3	3	1	1
CO-3: employ arrays and lists for effective memory management	CO-3	1	3	3	1	1
CO-4: use functions to simplify complex problems	CO-4	1	3	3	1	1
CO-5: derive the graphical solutions of Physics problems using matplotlib	CO-5	1	3	3	2	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	84	3	1.2	3
CO2	100	3	1.8	76	3	1.2	3
CO3	100	3	1.8	61	2	0.8	2.6
CO4	100	3	1.8	28	0	0	1.8
CO5	92	3	1.8	73	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3406CT(1)	Actual	2.77	2.63	2.68	2.73	2.73	Teaching methods for the unit IV (Functions and Objects) to be modified to improve the understanding of the students and the Assessment method to be revised accordingly
	Expected	1.4	2.6	3	1.2	1.2	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. NIMMA ELIZABETH R., Mrs. PUSHPA SELVI M. & Ms. SANJU VIKASINI K.M.

Signature of the Course Teacher

Course Code : PHY3406CT(2) **Batch : 2023**

Course Title : INTRODUCTION TO PYTHON PROGRAMMING

Faculty Name(s) : Dr. VIJAYA LAKSHMI S.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify the appropriate data types for solving scientific problems	CO-1	3	1	3	1	1
CO-2: construct Python programs using control statements	CO-2	1	3	3	1	1
CO-3: employ arrays and lists for effective memory management	CO-3	1	3	3	1	1
CO-4: use functions to simplify complex problems	CO-4	1	3	3	1	1
CO-5: derive the graphical solutions of Physics problems using matplotlib	CO-5	1	3	3	2	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	69	2	0.8	2.6
CO2	100	3	1.8	85	3	1.2	3
CO3	100	3	1.8	23	0	0	1.8
CO4	100	3	1.8	62	2	0.8	2.6
CO5	100	3	1.8	92	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3406CT(2)	Actual	2.6	2.6	2.6	2.67	2.67	The assessment methods will be reviewed, and additional programming may be incorporated into the teaching process.
	Expected	1.4	2.6	3	1.2	1.2	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. VIJAYA LAKSHMI S.

Signature of the Course Teacher

Course Code : PHY3502CM(1) **Batch : 2023**

Course Title : WAVE OPTICS

Faculty Name(s) : Dr. BINDU P.S. & Ms. VIJAYA LAKSHMI G

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: analyze the interference effects of light waves in different media	CO-1	3	3	3	3	3
CO-2: use mathematical methods to analyse Fraunhofer diffraction patterns	CO-2	3	3	2	3	2
CO-3: differentiate and analyse Fresnel diffraction patterns of various apertures/obstacles	CO-3	3	3	2	3	1
CO-4: employ the phenomenon of polarization to real life situations	CO-4	3	3	2	3	2
CO-5: relate the principles of geometrical optics instruments to real-time applications	CO-5	3	3	3	3	3

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	68	2	1.2	47	0	0	1.2
CO2	53	1	0.6	51	1	0.4	1
CO3	19	0	0	59	1	0.4	0.4
CO4	82	3	1.8	81	3	1.2	3
CO5	92	3	1.8	53	1	0.4	2.2

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3502CM(1)	Actual	1.56	1.56	1.58	1.56	1.69	Group discussion, peer teaching and problem solving techniques can be used to facilitate students for better learning . Frequent class tests also might help the students
	Expected	3	3	2.4	3	2.2	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. BINDU P.S. & Ms. VIJAYA LAKSHMI G

Signature of the Course Teacher

Course Code : PHY3502CM(2) **Batch : 2023**

Course Title : WAVE OPTICS

Faculty Name(s) : Ms. DIVYA A. & Ms. SAKTHI K.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: analyze the interference effects of light waves in different media	CO-1	3	3	3	3	3
CO-2: use mathematical methods to analyse Fraunhofer diffraction patterns	CO-2	3	3	2	3	2
CO-3: differentiate and analyse Fresnel diffraction patterns of various apertures/obstacles	CO-3	3	3	2	3	1
CO-4: employ the phenomenon of polarization to real life situations	CO-4	3	3	2	3	2
CO-5: relate the principles of geometrical optics instruments to real-time applications	CO-5	3	3	3	3	3

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	35	0	0	1.8
CO2	65	2	1.2	32	0	0	1.2
CO3	100	3	1.8	69	2	0.8	2.6
CO4	88	3	1.8	85	3	1.2	3
CO5	100	3	1.8	69	2	0.8	2.6

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3502CM(2)	Actual	2.24	2.24	2.23	2.24	2.2	The assessment method for the 1st unit will be reexamined.
	Expected	3	3	2.4	3	2.2	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. DIVYA A. & Ms. SAKTHI K.

Signature of the Course Teacher

Course Code : PHY3503CM(1) **Batch : 2023**

Course Title : ELECTRICITY AND MAGNETISM

Faculty Name(s) : Dr. SINTHIKA S. & Ms. VIJAYA LAKSHMI G

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: employ the concept of electric forces to understand the structure of atom	CO-1	3	2	2	3	1
CO-2: apply Gauss' law to symmetrical charge distributions	CO-2	3	1	1	3	1
CO-3: deduce electric potential for various charge distributions	CO-3	3	2	3	3	2
CO-4: analyse the effects of magnetic field on moving electric charges	CO-4	3	3	3	3	1
CO-5: appraise the role of passive components in electronic circuits	CO-5	3	3	1	3	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	58	1	0.6	68	2	0.8	1.4
CO2	100	3	1.8	76	3	1.2	3
CO3	74	3	1.8	61	2	0.8	2.6
CO4	100	3	1.8	36	0	0	1.8
CO5	100	3	1.8	86	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3503CM(1)	Actual	2.36	2.31	2.2	2.36	2.49	will reconsider the teaching methods adapted and frequent class tests can help the students
	Expected	3	2.2	2	3	1.4	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. SINTHIKA S. & Ms. VIJAYA LAKSHMI G

Signature of the Course Teacher

Course Code : PHY3503CM(2) **Batch : 2023**

Course Title : ELECTRICITY AND MAGNETISM

Faculty Name(s) : Dr. ESTHER ELIZABETH GRACE C. & Dr. JANCI RANI JULIET A.R.S.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: employ the concept of electric forces to understand the structure of atom	CO-1	3	2	2	3	1
CO-2: apply Gauss' law to symmetrical charge distributions	CO-2	3	1	1	3	1
CO-3: deduce electric potential for various charge distributions	CO-3	3	2	3	3	2
CO-4: analyse the effects of magnetic field on moving electric charges	CO-4	3	3	3	3	1
CO-5: appraise the role of passive components in electronic circuits	CO-5	3	3	1	3	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=4.8 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	81	3	1.8	65	2	0.8	2.6
CO2	100	3	1.8	62	2	0.8	2.6
CO3	100	3	1.8	42	0	0	1.8
CO4	73	3	1.8	58	1	0.4	2.2
CO5	88	3	1.8	77	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY3503CM(2)	Actual	2.44	2.45	2.28	2.44	2.43	will reconsider the teaching methods adapted
	Expected	3	2.2	2	3	1.4	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. ESTHER ELIZABETH GRACE C. & Dr. JANCI RANI JULIET A.R.S.

Signature of the Course Teacher

Course Code : PHE5401CM **Batch : 2022**

Course Title : DATA COMMUNICATION AND NETWORKING

Faculty Name(s) : Dr. SHARMILA BANU M.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: define the role of protocols and layered architecture in network communication	CO-1	2	3	3	1	1
CO-2: apply appropriate error detection and correction techniques in a network environment	CO-2	3	2	3	2	3
CO-3: classify the types of network addresses	CO-3	3	1	3	1	3
CO-4: relate the features of TCP and UDP	CO-4	3	2	3	1	2
CO-5: create cipher text to encrypt and decrypt data	CO-5	3	2	3	1	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=3.2 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	96	3	1.8	100	3	1.2	3
CO2	100	3	1.8	65	2	0.8	2.6
CO3	30	0	0	61	2	0.8	0.8
CO4	87	3	1.8	78	3	1.2	3
CO5	100	3	1.8	91	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHE5401CM	Actual	2.44	2.7	2.48	2.5	2.29	Attained as Expected
	Expected	2.8	2	3	1.2	2.2	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. SHARMILA BANU M.

Signature of the Course Teacher

Course Code : PHE5401CT **Batch : 2022**

Course Title : LINUX ADMINISTRATION

Faculty Name(s) : Dr. SHARMILA BANU M.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: list the basic linux and editor commands	CO-1	2	3	3	1	1
CO-2: apply user and group administration commands	CO-2	3	2	3	2	3
CO-3: create file partitions and mount devices	CO-3	3	1	3	1	3
CO-4: decide and configure the system administration tools in enterprise linux environments	CO-4	3	2	3	1	2
CO-5: analyse SAMBA and NFS network server services and configure new services	CO-5	3	2	3	1	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=3.2 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	96	3	1.2	3
CO2	100	3	1.8	83	3	1.2	3
CO3	48	0	0	76	3	1.2	1.2
CO4	100	3	1.8	83	3	1.2	3
CO5	100	3	1.8	82	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHE5401CT	Actual	2.61	2.82	2.64	2.7	2.51	Attained as Expected
	Expected	2.8	2	3	1.2	2.2	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. SHARMILA BANU M.

Signature of the Course Teacher

Course Code : PHY5202CM(1) **Batch : 2022**

Course Title : INTRODUCTION TO RESEARCH METHODOLOGY

Faculty Name(s) : Dr. BINDU P.S.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify a suitable method of formulating the research problem	CO-1	3	2	3	2	3
CO-2: recognise a relevant method for data collection	CO-2	3	3	3	2	3
CO-3: apply appropriate tool to present observed data	CO-3	3	3	3	3	3
CO-4: analyse the observed data using statistical methods	CO-4	3	3	3	3	3
CO-5: write a scientific report	CO-5	3	3	2	3	3

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=3.2 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	88	3	1.8	97	3	1.2	3
CO2	100	3	1.8	97	3	1.2	3
CO3	100	3	1.8	97	3	1.2	3
CO4	94	3	1.8	91	3	1.2	3
CO5	82	3	1.8	85	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY5202CM(1)	Actual	3	3	3	3	3	COs are attained
	Expected	3	2.8	2.8	2.6	3	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. BINDU P.S.

Signature of the Course Teacher

Course Code : PHY5202CM(2) **Batch : 2022**

Course Title : INTRODUCTION TO RESEARCH METHODOLOGY

Faculty Name(s) : Dr. JANCI RANI JULIET A.R.S.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify a suitable method of formulating the research problem	CO-1	3	2	3	2	3
CO-2: recognise a relevant method for data collection	CO-2	3	3	3	2	3
CO-3: apply appropriate tool to present observed data	CO-3	3	3	3	3	3
CO-4: analyse the observed data using statistical methods	CO-4	3	3	3	3	3
CO-5: write a scientific report	CO-5	3	3	2	3	3

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=3.2 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	87	3	1.2	3
CO2	100	3	1.8	96	3	1.2	3
CO3	100	3	1.8	96	3	1.2	3
CO4	74	3	1.8	74	3	1.2	3
CO5	100	3	1.8	87	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY5202CM(2)	Actual	3	3	3	3	3	COs are attained
	Expected	3	2.8	2.8	2.6	3	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of the Course Teacher

Course Code : PHY5204CP(1) **Batch : 2022**

Course Title : ELECTRONICS LAB - II

Faculty Name(s) : Dr. NIMMA ELIZABETH R., Dr. PADMAJA S., Mrs. PUSHPA SELVI M. & Ms. SANJU VIKASINI K.M.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify the tools and techniques to formulate the electronics experiments	CO-1	3	3	3	3	1
CO-2: setup experiments to study the applications of operational amplifier circuits	CO-2	3	3	3	3	1
CO-3: develop the skill of observation, troubleshooting and data interpretation	CO-3	3	3	3	3	1
CO-4: analyse the data and their uncertainty levels using numerical and graphical methods	CO-4	3	3	3	3	1
CO-5: prepare a lab report with meaningful conclusion	CO-5	3	3	2	3	1

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=0 Marks	Attainment Level	Attainment of CO(0.6*)	%>=0 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	100	3	1.2	3
CO2	100	3	1.8	100	3	1.2	3
CO3	100	3	1.8	100	3	1.2	3
CO4	100	3	1.8	100	3	1.2	3
CO5	100	3	1.8	100	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY5204CP(1)	Actual	3	3	3	3	3	Expected course outcomes are attained
	Expected	3	3	2.8	3	1	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. NIMMA ELIZABETH R., Dr. PADMAJA S., Mrs. PUSHPA SELVI M. & Ms. SANJU VIKASINI K.M.

Signature of the Course Teacher

Course Code : PHY5204CP(2) **Batch : 2022**

Course Title : ELECTRONICS LAB - II

Faculty Name(s) : Ms. SAKTHI K.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: identify the tools and techniques to formulate the electronics experiments	CO-1	3	3	3	3	1
CO-2: setup experiments to study the applications of operational amplifier circuits	CO-2	3	3	3	3	1
CO-3: develop the skill of observation, troubleshooting and data interpretation	CO-3	3	3	3	3	1
CO-4: analyse the data and their uncertainty levels using numerical and graphical methods	CO-4	3	3	3	3	1
CO-5: prepare a lab report with meaningful conclusion	CO-5	3	3	2	3	1

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=0 Marks	Attainment Level	Attainment of CO(0.6*)	%>=0 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	100	3	1.2	3
CO2	100	3	1.8	100	3	1.2	3
CO3	100	3	1.8	100	3	1.2	3
CO4	100	3	1.8	100	3	1.2	3
CO5	100	3	1.8	100	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY5204CP(2)	Actual	3	3	3	3	3	Expected course outcomes are attained
	Expected	3	3	2.8	3	1	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. SAKTHI K.

Signature of the Course Teacher

Course Code : PHY5401CT **Batch : 2022**

Course Title : INTRODUCTION TO INTERNET OF THINGS

Faculty Name(s) : Dr. PADMAJA S. & Ms. VIJAYA LAKSHMI G

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	**2**	**3**	**4**	**5**
CO-1: make use of the components of Internet of Things	CO-1	1	3	3	1	1
CO-2: identify suitable IoT methodology for networking and virtualization	CO-2	3	2	3	2	3
CO-3: employ appropriate sensor technologies for sensing real world entities	CO-3	3	2	3	2	3
CO-4: develop IoT using hardware platforms	CO-4	3	2	3	1	2
CO-5: develop real time IoT applications on an embedded platform	CO-5	3	2	3	1	2

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	**%>=8 Marks**	**Attainment Level**	**Attainment of CO(0.6*)**	**%>=3.2 Marks**	**Attainment Level**	**Attainment of CO(0.4*)**	
CO1	100	3	1.8	97	3	1.2	3
CO2	100	3	1.8	97	3	1.2	3
CO3	97	3	1.8	97	3	1.2	3
CO4	100	3	1.8	94	3	1.2	3
CO5	100	3	1.8	94	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY5401CT	Actual	3	3	3	3	3	expected COs were attained
	Expected	2.6	2.2	3	1.4	2.2	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Dr. PADMAJA S. & Ms. VIJAYA LAKSHMI G

Signature of the Course Teacher

Course Code : PHY5501CM(1) **Batch : 2022**

Course Title : DIGITAL ELECTRONICS

Faculty Name(s) : Ms. KAVETHA S, Dr. NIMMA ELIZABETH R., Mrs. PUSHPA SELVI M. & Ms. SANJU VIKASINI K.M.

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: review various number systems and basics of Boolean Algebra	CO-1	2	3	3	3	1
CO-2: apply the K-map to simplify complex circuits	CO-2	2	3	3	3	2
CO-3: design arithmetic and logic circuits using Boolean algebra	CO-3	1	3	3	3	2
CO-4: design various registers and counters using flip-flops	CO-4	2	3	3	3	3
CO-5: relate the impact of digital electronics in everyday life	CO-5	2	3	3	3	3

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=3.2 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	85	3	1.2	3
CO2	100	3	1.8	97	3	1.2	3
CO3	100	3	1.8	55	1	0.4	2.2
CO4	100	3	1.8	61	2	0.8	2.6
CO5	97	3	1.8	85	3	1.2	3

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY5501CM(1)	Actual	2.82	2.76	2.76	2.76	2.75	teaching methods and assessment components to be revisited and modified for unit III
	Expected	1.8	3	3	3	2.2	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. KAVETHA S, Dr. NIMMA ELIZABETH R., Mrs. PUSHPA SELVI M. & Ms. SANJU VIKASINI K.M.

Signature of the Course Teacher

Course Code : PHY5501CM(2) **Batch : 2022**

Course Title : DIGITAL ELECTRONICS

Faculty Name(s) : Ms. ANTONY BLESSY E & Ms. KAVETHA S

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: review various number systems and basics of Boolean Algebra	CO-1	2	3	3	3	1
CO-2: apply the K-map to simplify complex circuits	CO-2	2	3	3	3	2
CO-3: design arithmetic and logic circuits using Boolean algebra	CO-3	1	3	3	3	2
CO-4: design various registers and counters using flip-flops	CO-4	2	3	3	3	3
CO-5: relate the impact of digital electronics in everyday life	CO-5	2	3	3	3	3

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=3.2 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	52	1	0.4	2.2
CO2	100	3	1.8	65	2	0.8	2.6
CO3	100	3	1.8	52	1	0.4	2.2
CO4	100	3	1.8	78	3	1.2	3
CO5	100	3	1.8	61	2	0.8	2.6

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHY5501CM(2)	Actual	2.56	2.52	2.52	2.52	2.6	Review the assessment method used.
	Expected	1.8	3	3	3	2.2	

sd./ Dr. JANCI RANI JULIET A.R.S.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. ANTONY BLESSY E & Ms. KAVETHA S

Signature of the Course Teacher

Course Code : PHYQ5402CM **Batch : 2022**

Course Title : MOLECULAR SPECTROSCOPY

Faculty Name(s) : Ms. ANNIE POORNA S.R., Dr. AROCKIA SHYAMALA PANIYARASI & Ms. VIJAYA LAKSHMI G

COs Consistency with PSOs

Course Outcome	CO	Programme Specific Outcome				
		1	2	3	4	5
CO-1: differentiate the types of spectroscopic techniques	CO-1	3	3	2	2	2
CO-2: derive the structural parameters of linear and symmetric top molecules from rotational spectra	CO-2	3	3	2	3	2
CO-3: identify the functional groups from vibrational modes of the molecules	CO-3	3	3	2	3	3
CO-4: compare the structural features of molecules using IR and Raman spectra	CO-4	3	3	2	3	3
CO-5: relate the principles of resonance spectroscopy to real time applications	CO-5	3	3	1	3	3

3» Strongly correlated; 2» Moderately correlated; 1» Weakly correlated

CO Attainment

Formative Assessment				Summative Examination			Total
CO	%>=8 Marks	Attainment Level	Attainment of CO(0.6*)	%>=3.2 Marks	Attainment Level	Attainment of CO(0.4*)	
CO1	100	3	1.8	100	3	1.2	3
CO2	71	3	1.8	94	3	1.2	3
CO3	100	3	1.8	97	3	1.2	3
CO4	100	3	1.8	26	0	0	1.8
CO5	88	3	1.8	47	0	0	1.8

PSO Attainment

Course Code	PSO Attainment	PSO1	PSO2	PSO3	PSO4	PSO5	Analysis Report
PHYQ5402CM	Actual	2.52	2.52	2.6	2.49	2.45	COs Attained
	Expected	3	3	1.8	2.8	2.6	

sd./ Dr. NIMMA ELIZABETH R.

Signature of Head of the Department/ Co-ordinator

sd./ Ms. ANNIE POORNA S.R., Dr. AROCKIA SHYAMALA PANIYARASI & Ms. VIJAYA LAKSHMI G

Signature of the Course Teacher