



Satish Pradhan Dnyanasadhana College, Thane

(Arts, Science and Commerce)
Re-Accredited "B+" Grade (CGPA 2.69) by NAAC, ISO 21001:2018 (Certified)
Affiliated to University of Mumbai

B.Sc. Physics

Program Specific Outcome

PSO1	Ability to apply knowledge of Physics laws, mathematics, and basic programming that may be relevant and appropriate to the domain.
PSO2	Ability to apply laws of physics, implement them in practical setup and circuits, and develop Physics-based domestically useful experiments, processes, and components, to meet desired needs.
PSO3	Ability to communicate effectively in theoretical, mathematical, experimental and oral forms and do effective presentation and prepare project reports.
PSO4	Ability to make responsible citizens through ethical and social practices with importance to sustainability in respective fields.



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Department	Semester	Course
Physics	I	Physics –I - Classical Physics

At the end of the course, Students will be able to:

CO No.	Course Outcomes	Bloom's Level	Mapping of PO & PSO's
CO1	Recall and describe the concepts of Newton's laws and applications in daily life.	L1/L2	PO1 PSO1
CO2	Explain and demonstrate problems on friction Understand Work and Energy Equivalence Analyze the basic concepts Elasticity, Viscosity and Fluid dynamics	L3/L4	PO1 PO2 PSO2
CO3	Understand behavior of real gasses in relation to their thermo dynamical response.	L3	PO2 PSO2



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Physics	I	Physics –II - Modern Physics

At the end of the course, Students will be able to:

CO No.	Course Outcomes	Bloom's Level	Mapping of PO & PSO's
CO1	Recall and describe the concepts of nuclear properties, nuclear behavior and various types of nuclear reactions	L1/L2	PO1 PSO1
CO2	Explain and demonstrate problems on quantum mechanical concepts	L3/L4	PO1 PO2 PSO2
CO3	Understand the concept of radioactivity, its applications and different types of equilibria in radioactive elements. Understand various types of nuclear detectors and their applications	L3	PO2 PSO2



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Department	Semester	Course
Physics	I	Physics –Practical - I

At the end of the course, Students will be able to:

CO No.	Course Outcomes	Bloom's Level	Mapping of PO & PSO's
CO1	Recall and describe the concepts of Physics laws and practice the skills while performing experiments	L1/L2	PO1 PSO1
CO2	Explain, demonstrate Understand & practice the skills while performing experiments	L3/L4	PO1 PO2 PSO2
CO3	Understand and Correlate the physics theory concepts to practical application	L3	PO2 PSO2 PSO3



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Department	Semester	Course
Physics	II	Physics –I – Electricity and Electronics

At the end of the course, Students will be able to:

CO No.	Course Outcomes	Bloom's Level	Mapping of PO & PSO's
CO1	Recall and describe the basic concepts of Alternating current theory, AC bridges and Circuit Theorems.	L1/L2	PO1 PSO1
CO2	Explain and demonstrate the basics of Analog Electronics and apply them in real life situations.	L3	PO1 PO2 PSO2
CO3	Understand the basics of Digital Electronics and apply them in real life situations with few well known daily life examples and their applications.	L4	PO2 PSO2



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Department	Semester	Course
Physics	II	Physics –I - Optics I

At the end of the course, Students will be able to:

CO No.	Course Outcomes	Bloom's Level	Mapping of PO & PSO's
CO1	Recall and describe the concepts of lens, lens defects and their minimization.	L1/L2	PO1 PSO1
CO2	Explain and demonstrate the effect of combination of lenses implied to the eyepiece of an optical instrument.	L3	PO1 PO2 PSO2
CO3	Understand interference of light with few well known daily life examples. Understand Lasers and Optical fibers, their applications in day to day life.	L4	PO2 PSO2



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Department	Semester	Course
Physics	II	Physics – Practical - 2

At the end of the course, Students will be able to:

CO No.	Course Outcomes	Bloom's Level	Mapping of PO & PSO's
CO1	Recall and describe the concepts of Physics laws and practice the skills while performing experiments	L1/L2	PO1 PSO1
CO2	Explain, demonstrate Understand & practice the skills while performing experiments	L3	PO1 PO2 PSO2
CO3	Understand and Correlate the physics theory concepts to practical application	L4	PO2 PSO2 PSO3



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Physics	III	Physics –II - Mathematical Methods & Applied Physics - I

At the end of the course, Students will be able to:

CO No.	Course Outcomes	Bloom's Level	Mapping of PO & PSO's
CO1	Recall and describe the basics of Mathematical Techniques required to Physical phenomena at the undergraduate level and get exposure to important ideas of differential equations.	L1/L2	PO1 PSO1
CO2	Explain and demonstrate problems on non homogeneous differential equations and partial differential equations using simple methods and applications of them in physical situations.	L3/L4	PO1 PO2 PSO2
CO3	Understand the basis of Acoustics of Buildings and Basics of Communication	L3	PO2 PSO2



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Physics	IV	Physics –III - Quantum mechanics

At the end of the course, Students will be able to:

CO No.	Course Outcomes	Bloom's Level	Mapping of PO & PSO's
CO1	Recall and describe the postulates of quantum mechanics and to understand its importance in explaining significant phenomena in Physics.	L1/L2	PO1 PSO1
CO2	Explain and summarize the Matter waves-De Broglie hypothesis. Davisson and Germer experiment. Wave particle duality.	L3	PO1 PO2 PSO2
CO3	Understand the Concept of Schrodinger steady state equations and its applications.	L4	PO2 PSO2