



यशवंतराव चव्हाण शिक्षण प्रसारक मंडळाचे

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दादासाहेब दिगंबर शंकर पाटील

कला, वाणिज्य व विज्ञान महाविद्यालय, एरंडोल, जि. जळगाव

YASHWANTRAO CHAVAN SHIKSHAN PRASARAK MANDAL'S

DADASAHEB DIGAMBAR SHANKAR PATIL

ARTS, COMMERCE & SCIENCE COLLEGE, ERANDOL DIST. JALGAON

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ISO 9001 : 2015

Principal

Department of Physics

Class	Code No.	Title of Course
F.Y.B.Sc	PHY-102	Dynamics & Elasticity
	CO1:	To Understand Newton's law of Gravitation , Kepler's Laws
	CO2:	To Know about satellite in circular orbit & its application, Basic idea of GPS
	CO3:	To understand Simple Harmonic Motion & Differential equation of SHM & its solution.
	CO4:	To know about Damped Oscillation.
	CO5:	To Know about Hooke's law, Stress strain diagram & relation between elastic constant.
	CO6:	To understand Torsional pendulum and its application to determine modulus of rigidity.
	CO7:	Basic Concept of Viscosity
	CO8:	General concept of fluid flow, Streamline and turbulent flow, Equation of continuity of flow, Energy possessed by a liquid.
	CO9:	Definition of viscosity, Poiseuille's equation, Experimental determination of coefficient of viscosity by using Poiseuille's equation.

Class	Code No.	Title of Course
F.Y.B.Sc	PHY-202	Dielectrics, magnetism & Electromagnetism
	CO1:	To Understand Dielectrics, Capacitance of an isolated spherical conductor, Parallel plate, spherical and cylindrical condenser.
	CO2:	To Know about Guass's Theorem
	CO3:	Classify different types of magnetic materials with their properties.
	CO4:	To acquire knowledge about the phenomenon of electromagnetic induction.
	CO5:	To Know about Magnetostatics: Biot-Savart's law & its applications
	CO6:	To understand Torsional pendulum and its application to determine modulus of rigidity.
	CO7:	To understand Faraday's laws of electromagnetic induction, Lenz's law
	CO8:	To know about Maxwell's equation & Equation of continuity of current.

Class	Code No.	Title of Course
S.Y.B.Sc	PHY-301	Thermodynamics and Kinetic theory of gases
	CO1:	To Understand The Zero th and First law of thermodynamics and its application.
	CO2:	To Know about Second law of thermodynamics and Carnot Cycle
	CO3:	To Know about Carnot's Engine, Otto Engine and Cycle, Diesel Engine and Cycle, Efficiencies of all heat engines.
	CO4:	To acquire knowledge about the Maxwell's law of distribution of velocities and its experimental verification.
	CO5:	To Know Transport Phenomena
	CO6:	To understand Law of equipartition of energy and its applications

Class	Code No.	Title of Course
S.Y.B.Sc	PHY-401	Waves, Oscillations and Acoustics
	CO1:	The ability of students developed how to do composition of two S.H.M.s having equal frequencies along same line of vibration.
	CO2:	They learned how to get the lissajous figures using mechanical, optical and electrical methods
	CO3:	They understand what is Oscillations and how it is divided into different type on basis of it motion and different force action on it.
	CO4:	They understand when the amplitude resonance and its relation with maximum power.
	CO5:	They learned how hearing ability of human being changes on the basis of sound intensity and its relation with loudness.
	CO6:	They learned how we can produce ultrasonic wave
	CO7:	They learned Doppler effect in Sound & Doppler effect in light

Class	Title of the Course	Course Specific Outcomes (The students would be able to)
F. Y. B.Sc. Sem I	PHY 101: Basic Mechanics	1. Apply the concept of use of knowledge of mechanics to real life problems. 2. Understanding of the course will create scientific temperament. 3. To provide education in physics of the highest quality at the undergraduate level and generate graduates of the caliber sought by industries and public service as well as academic teachers and researchers of the future. 4. To acquire deep knowledge in fundamental aspects of Physics and basic knowledge in the specialized thrust areas like Mechanics, electricity and magnetism electrostatics and mathematical physics.
	PHY-102 Dynamics and Elasticity	1. To acquire deep knowledge in fundamental aspects of Physics and basic knowledge in the elasticity and mathematical physics.
	PHY-103 Course Code LAB -I	1. Acquire knowledge, skills, working methods and ways of expression which will reflect on all round development of the students' attitudes towards scientific thinking and its applications 2. To develop attitudes such as concern for accuracy and precision, objectivity, and enquiry.
F. Y. B. Sc.	PHY-201 Electricity and	1. To impart knowledge of basic concepts in Electricity and Magnetism.

Sem II	Electrostatics	- To provide the knowledge and methodology necessary for solving problems in Physics. - The course also involves the related experiments based on the theory. - Apply the concept of use of knowledge of Electricity and Magnetism to real life problems. - Understanding of the course will create scientific temperament.
	PHY-202 Magnetism and Electromagnetism	To acquire deep knowledge in fundamental aspects of Physics and basic knowledge in the specialized thrust areas like Mechanics, electricity and magnetism, electrostatics and mathematical physics.
	PHY-203 LAB -II	- Acquire knowledge, skills, working methods and ways of expression which will reflect on all round development of the students' attitudes towards scientific thinking and its applications - To develop attitudes such as concern for accuracy and precision, objectivity, and Enquiry.
S. Y. B. Sc. Sem III	PHY 301 Thermodynamics and Kinetic theory of gases	- To impart knowledge of basic concepts in Thermodynamics and kinetic theory of gases. - To provide the knowledge and methodology necessary for solving problems in Physics. - The course also involves the related experiments based on the theory. - Apply the concept of use of knowledge of Thermodynamics and kinetic theory of gases to real life problems. - Understanding of the course will create scientific temperament.
	PHY 302(A) Electronics-I	
	PHY 303 LAB-III	
	PHY 304: (Skill enhancement course I) Renewable energy and Energy Harvesting	
S. Y. B. Sc. Sem IV	PHY 401 Waves, Oscillations and acoustics	- To impart knowledge of basic concepts in Electronics. - To provide the knowledge and methodology necessary for solving problems in Physics. - The course also involves the related experiments based on the theory. - Apply the concept of use of knowledge of Electronics to real life problems. - Understanding of the course will create scientific temperament.
	PHY 402 Optics and LASERS	
	PHY 403 Lab IV	
	PHY 404: (Skill enhancement course II) Electrical Circuit and Network Skill	