

Yashwantrao Chavan Warana Mahavidyalaya, Warananagar

Department of Physics

Course Outcomes (CO), Program outcomes (PO), and Program Specific Outcomes (PSO)

A) U.G.Course/Programme

Title of course	Course Outcomes (Statements)
B.Sc.I Paper-I DSC-I A Mechanics	1. Student understood the idea of vector addition and subtraction 2. Student understood the meaning of vector product (dot and cross) 3. Student understood derivatives of vector with respect to parameter such as velocity and acceleration 4. Students are able to solve the problems on vector.
Title of course	Course Outcomes (Statements)
B.Sc.I Paper-I DSC-I A Mechanics-I	1. Student understood meaning of ordinary and partial differential equation. 2. Student understood meaning of Ist and IInd ordinary homogeneous differential equation with a constant coefficient 3. Students are able to solve the problem 4. Students had idea of frame of reference 5. Student understood Newton's law of motion
Title of course	Course Outcomes (Statements)
B.Sc.II Paper-V DSC- C I Thermal Physics and Statistical Mechanics-I	1. Student understood thermodynamic system and thermodynamic variables 2. Student understood equation of state 3. Student understood zeroth, first and second law of thermodynamics 4. Student understood isothermal and adiabatic processes 5. Student understood the equation of Carnot's engine and cycle 6. Students are able to solve the problems.

Title of course	Course Outcomes (Statements)
Paper IX B.Sc. III Paper-I B.Sc.I Mechanics I Paper V B.Sc.II Thermal Physics And Statistical Mechanics	1. Student understood concept of O.C.C.S. 2. Student understood basic differential equation 3. Student understood basics concept in statistical Physics 4. Student understood classical and quantum statistics 5. Student understood basic concept and its application 6. Student understood conservation in rotational motion 7. Student understood M.I. of spherical symmetrical 8. Student understood thermal Physics and kinetic theory

Title of course	Course Outcomes (Statements)
B.Sc.I (Mechanics) B.Sc.III (Quantum Mechanics) B.Sc.III (Atomic,Molecular spectra Astronomy, Astro Physics)	1. Students understood concept of bending moment and cantilever 2. Students understood torsional oscillation, determination of Y, K, η 3. Students understood S.T. by jaeger's method 4. Students understood wave function, matter wave, Schrodinger's wave equation 5. Students understood application of Schrodinger's wave equation 6. Students understood Quantum mechanics of hydrogen atoms 7. Students understood Doublet fine structure 8. Students understood effect of magnetic and electrical field on atomic spectra 9. Students understood molecular spectra and Raman effect 10. Students understood the topics such as milky way galaxy, cosmology from

B.Sc.II (Optics-II)	Astronomy, Astro Physics - Students understood concept of cardinal points of an optical system - Students understood as how to use cardinal points in formation of image. - Students understood lateral, axial, angular magnification - Students understood Fraunhofer type of diffraction in plane diffraction grating - Students know the phenomenon of diffraction of light at straight edge - Students know the phenomenon of diffraction using Fresnel's half period zone and its applications. - Students understood the interference pattern due to Lloyd's single mirror and Newton's ring method.
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Title of course	Course Outcomes (Statements)
Paper IX B.Sc. III Mathematical and Statistical Physics B.Sc.III Practical Paper-I B.Sc.I Mechanics I Paper V B.Sc.II Thermal Physics And Statistical Mechanics	- Student understood concept of Crystal Structure. - Student understood basic Direct Lattice and Reciprocal Lattice - Student understood basics concept in Solid state Physics - Student understood X- ray Diffraction tool to analyze crystal structure. - Student understood basic concept and its application - Student understood conservation of electrical energy by using solar energy - Student understood M.I. of spherical symmetrical - Student understood thermal Physics and kinetic theory

Title of course	Course Outcomes (Statements)
B.Sc.III (Classical Mechanics) B.Sc.II DSC-C II Wave and optics I	- Student understood frequencies of oscillatory system - Student understood the idea of moving origin of coordinate and rotating coordinate system - Student understood the meaning of pseudo force, Coriolis force and its effecting nature - Student understood the meaning of viscosity and rate of flow liquid through horizontal capillary tube and points experimental determination of viscosity using Poiseuille's method - Students are able to solve the problems on coefficient of viscosity.

Title of course	Course Outcomes (Statements)
B.Sc.III (Classical Mechanics)	- Student understood the basics mechanics of particle system of particle - Student understood the idea of coupled oscillatory system. - Student understood the concept of constraint DOF general coordinate - Student understood Lagrangian equation and its application - Student understood techniques calculus of variation. - Student understood the meaning of rigid body motion.

Head
Department of Physics