

Course Outcomes
Physics

FIRST YEAR / I SEMESTER

Paper I: Mechanics & Properties of Matter

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Vector Analysis, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Vector Analysis, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Vector Analysis, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self–confidence.

FIRST YEAR / II SEMESTER

Paper II: Waves & Oscillations

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars and Ultrasonics.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars and Ultrasonics.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars and Ultrasonics.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars and Ultrasonics.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self–confidence.

SECOND YEAR / III SEMESTER

Paper III: Optics and Laser Physics

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Aberrations, Interference, Diffraction, Polarization, Lasers & Holography and Fiber optics.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Aberrations, Interference, Diffraction, Polarization, Lasers & Holography and Fiber optics.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Aberrations, Interference, Diffraction, Polarization, Lasers & Holography and Fiber optics.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self–confidence.

SECOND YEAR / IV SEMESTER

Paper IV: Thermodynamics & Radiation Physics

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and Quantum theory of radiation.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and Quantum theory of radiation.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and Quantum theory of radiation.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals of Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and Quantum theory of radiation.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self-confidence.

THIRD YEAR / V SEMESTER

Paper V: Electricity, Magnetism & Electronics

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams, circuits and graphs related to the practicals of Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self-confidence.

THIRD YEAR / V SEMESTER

Paper VI: Modern Physics

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Atomic and molecular physics, Matter waves & Uncertainty Principle, Quantum (wave) mechanics, General Properties of Nuclei, Radioactivity decay, Maxwell's equations, Crystal Structure and Superconductivity.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Atomic and molecular physics, Matter waves & Uncertainty Principle, Quantum (wave) mechanics, General Properties of Nuclei, Radioactivity decay, Maxwell's equations, Crystal Structure and Superconductivity.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Electric field intensity and potential, Dielectrics, Atomic and molecular physics, Matter waves & Uncertainty Principle, Quantum (wave) mechanics, General Properties of Nuclei, Radioactivity decay, Maxwell's equations, Crystal Structure and Superconductivity.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams, circuits and graphs related to the practicals of Atomic and molecular physics, Matter waves & Uncertainty Principle, Quantum (wave) mechanics, General Properties of Nuclei, Radioactivity decay, Maxwell's equations, Crystal Structure and Superconductivity.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self-confidence

THIRD YEAR / VI SEMESTER

Paper VII (B): Elective Paper: Material Science

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials, Mechanical Behavior of Materials, Magnetic Materials and Dielectric Materials.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials, Mechanical Behavior of Materials, Magnetic Materials and Dielectric Materials.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Materials and Crystal Bonding, Defects and Diffusion in Materials, Mechanical Behavior of Materials, Magnetic Materials and Dielectric Materials.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals of Materials and Crystal Bonding, Defects and Diffusion in Materials, Mechanical Behavior of Materials, Magnetic Materials and Dielectric Materials.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self–confidence.

THIRD YEAR / VI SEMESTER

Cluster Elective Paper VIII-B1 : Fundamentals of Nanoscience

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nano electronics and Biomaterials.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nano electronics and Biomaterials.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nano electronics and Biomaterials.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practical's of Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nano electronics and Biomaterials.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self–confidence.

THIRD YEAR / VI SEMESTER

Cluster Elective Paper VIII-B2: Synthesis and Characterization

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods.

CO4. They could check the apparatus; perform experiments, records the readings, draw the diagrams and graphs related to the practical's of Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self-confidence.

THIRD YEAR / VI SEMESTER

Cluster Elective Paper VIII-B3: Applications of Nanomaterials and Devices

After the successful completion of the course the learning outcomes are

CO1. The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Optical properties, Electrical transport, Applications, Nano electronics and Nano biotechnology and Medical applications of Nanomaterials and Devices.

CO2. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Optical properties, Electrical transport, Applications, Nano electronics and Nano biotechnology and Medical applications of Nanomaterials and Devices.

CO3. They can analyze, interprets, predicts, relates and realizes the various phenomena in Optical properties, Electrical transport, Applications, Nano electronics and Nano biotechnology and Medical applications of Nanomaterials and Devices.

CO4. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practical's of Optical properties, Electrical transport,

Applications, Nano electronics and Nano biotechnology and Medical applications of Nanomaterials and Devices.

CO5. The students develop scientific interest by questioning, reading, discussing and debating.

CO6. The student develops scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.

CO7. The students develop personality traits such as Punctuality, faithfulness and self-confidence.