

BACHELOR OF SCIENCE IN PHYSICS

Programme Specific Outcome

PSO-1. Impart basic knowledge of the discipline of Physics including phenomenology, theories and techniques, concepts and general principles.

PSO-2. Support the ability to ask physical questions and to obtain solutions to physical questions by use of qualitative and quantitative reasoning and by experimental investigation.

PSO-3. Appreciate the physical world and the discipline of Physics. To develop curiosity, creativity and reasoned skepticism and understanding links of Physics to other disciplines and to give encouragement to societal issues.

PSO-4. Provide a firm foundation in every aspect of Physics and to explain a broad spectrum of modern trends in physics and to develop experimental, computational and mathematics skills of students.

Course Outcome

Semester 1	
Course	Course outcomes
PH1CRT01 Methodology and Perspectives of Physics	CO-1. Understand the pursuit of Physics, its history and methodology. CO-2 Understand the importance of measurement which is central to physics. CO-3. understand the vector concepts, its Applications and Physical significance CO-4 Analyze and Apply the Cartesian, spherical polar and cylindrical coordinate systems CO-5. Develop an understanding and Manipulating Skill of Number Systems.
Semester 2. PH2CRT02 Mechanics and Properties of Matter	CO-1. Acquire engineering skills and practical knowledge, which help the student in their everyday life. CO-2. Understand basic requirements for their higher studies. This course will provide a theoretical basis for doing experiments in

	<p>related areas.</p> <p>CO-3. Understand Basic mechanics, reasoning power, initiative skills and calculus</p>
<p>Semester 3</p> <p>PH3CRT03 – Optics, Laser and Fiber Optics</p>	<p>CO-1 Apply foundations of optics and photonics for an intensive study of advanced topics at a later stage.</p> <p>CO-2 understand Concepts of waves, basics in Mathematics.</p>
<p>Semester 4</p> <p>PH4CRT04- Semiconductor Physics</p>	<p>CO-1 Understand the world of Electronics and apply the physical principles and applications of Electronics.</p> <p>CO-2. Understand and analyze the know-how of semiconductors.</p> <p>CO-3. Remember the basic concepts of semiconductors and apply it to circuit fundamentals, current laws, network theorems, passive elements etc.</p>
<p>Semester 5</p> <p>PH5CRT05 – Electricity and Electrodynamics</p>	<p>CO-1. Understand Electricity and Electrodynamics that have the key role in the development of modern technological world.</p> <p>CO-2. Understand that without electric power and communication facilities, life on earth stands still.</p> <p>CO-3. Create a sound foundation in electricity and electrodynamics.</p> <p>CO-4. Analyse and Create mathematical skills in Vector analysis, Vector calculus and use it in electricity and magnetism.</p>
<p>PH5CRT06 – Classical and Quantum Mechanics</p>	<p>CO-1. Understand and remember the concepts of Newtonian mechanics, its limitations and the advantages of classical mechanics.</p> <p>CO-2. Apply the knowledge of Algebra, Calculus and Newtonian Mechanics in Classical and Quantum Mechanics.</p> <p>CO-3 Apply and Evaluate the basic problems in Classical and Quantum Mechanics.</p>
<p>PH5CRT07 – Digital Electronics and Programming</p>	<p>CO-1 Understand back ground for applications of electronics in mathematical computation.</p> <p>CO-2. Develop the Basic knowledge of electronics and Binary Mathematics</p>

<p>PH5CRT08 – Environmental Physics and Human Rights</p>	<p>CO-1. Create Environmental Education for research and investigate about complex environmental issues by analysing critical and creative thinking skills.</p> <p>CO-2. Understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, and apply this for keeping environment healthy and sustainable for the future.</p> <p>CO-3. Create awareness among the students about the environment and its various problems and thus Create an inter-relationship between man and environment to protect the nature and natural resources.</p>
<p>PH5OPT02 -Physics In daily Life</p>	<p>CO-1. Understand the basic in physics and relate to our daily life</p>
<p>Semester 6 PH6CRT09- Thermal and Statistical Physics</p>	<p>CO-1. Develop a working knowledge of statistical mechanics and to apply knowledge to explore various applications related to topics in material science and the physics of condensed matter.</p> <p>CO-2. Apply the Basics of calculus and quantum mechanics required for problem solving in thermal and statistical Physics.</p>
<p>PH6CRT10 -- Relativity and Spectroscopy</p>	<p>CO-1. Understand the principles of spectroscopy and special theory of relativity.</p> <p>CO-2. understand the a Special theory of relativity</p> <p>CO-3. Understand the Spectroscopy both molecular and Atomic Spectroscopy and Its Applications</p>
<p>PH6CRT11 – Nuclear, Particle and Astrophysics</p>	<p>CO-1. analyze the interior of nucleus and interaction between nucleons</p> <p>CO-2. Remember and apply the Basic mathematics & quantum mechanics for problem solving in nuclear and particle physics</p>
<p>PH6CRT12- Solid State Physics</p>	<p>CO-1. Understand various types of phenomenon such as electro-magnetic properties, super-conductivity and super fluidity.</p> <p>CO-2. Apply the Basics of Mathematics and quantum mechanics to</p>

	analyze problems in solid state Physics.
PH6CBT03 – Computational Physics	CO-1. Understand and create a knowledge of problem solving techniques by numerically. CO-2. Develop the Basic mathematics and electronics to solve the numerical equations.