

**A.V.V.M. SRI PUSHPAM COLLEGE (AUTONOMOUS),  
POONDI-613 503, THANJAVUR**



**1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific outcomes (PSOs) and Course Outcomes (COs) of the Programmes offered by the Institution**

## **COURSE OUTCOMES**

# M.Sc.,PHYSICS(2017-2018)

Semester	Category	Paper Code	Title of the Paper	Outcome
<b>I</b>	Core	<b>17P1PHC1</b>	Classical Dynamics	<ul style="list-style-type: none"> <li>• To gain the knowledge about Lagrangian and Hamiltonian formulations.</li> <li>• To introduce the concepts of rigid body dynamics and relativistic mechanics.</li> <li>• To introduce the basic concepts of nonlinear dynamics.</li> </ul>
	Core	<b>17P1PHC2</b>	Mathematical Physics – I	<ul style="list-style-type: none"> <li>• To introduce knowledge about vectors and tensors.</li> <li>• To gain the idea about the differential equations and special functions.</li> </ul>
	Core	<b>17P1PHC3</b>	Statistical Mechanics	<ul style="list-style-type: none"> <li>• To introduce the knowledge about the statistical description of particles.</li> <li>• To introduce the concepts of Quantum statistics and phase transitions.</li> </ul>
	Core	<b>17PIPHCP1</b>	Major Practical – I	<ul style="list-style-type: none"> <li>• Students acquire skills on carrying out general experiments in optics, solid state physics etc.</li> </ul>
	Major Elective	<b>17P1PHEL1A</b> <b>17P1PHEL1B</b>	Nanophysics Laser and Fiber Optic Communication	<ul style="list-style-type: none"> <li>• To gain the knowledge about Nanotechnology.</li> </ul> <p style="text-align: center;">(or)</p> <ul style="list-style-type: none"> <li>• To give general ideas on Lasers.</li> <li>• To gain the knowledge about fiber optics.</li> </ul>
	Core	<b>17P2PHC4</b>	Electromagnetic Theory	<ul style="list-style-type: none"> <li>• To acquire the knowledge in Electrostatics and Magnetostatics.</li> <li>• To introduce the knowledge about the electromagnetic waves and relativistic electrodynamics.</li> </ul>
	Core	<b>17P2PHC5</b>	Mathematical Physics-II	<ul style="list-style-type: none"> <li>• To gain the knowledge in complex variables, matrices, vector spaces and Green's functions.</li> <li>• To introduce the concepts of Fourier transform and group theory.</li> </ul>

<b>II</b>	Core	<b>17P2PHC6</b>	<b>Electronics and Instrumentation</b>	<ul style="list-style-type: none"> <li>To gain the knowledge in Electronics and Instrumentation.</li> </ul>
	Core	<b>17P2PHC7</b>	<b>Numerical Methods in Physics</b>	<ul style="list-style-type: none"> <li>To gain the knowledge in Numerical methods in physics.</li> </ul>
	Core	<b>17P2PHCP2</b>	<b>Major Practical - II</b>	<ul style="list-style-type: none"> <li>Students acquire skills in doing experiments in analog and digital electronics.</li> </ul>
	Major Elective	<b>17P2PHEL2A</b> <b>17P2PHEL2B</b>	<b>Crystal growth &amp; Thin Films</b> <b>Medical Physics</b>	<ul style="list-style-type: none"> <li>To introduce the knowledge of crystal growth</li> <li>To know the basic ideas of thin films (or)</li> <li>To gain the knowledge about Medical Physics</li> </ul>
<b>III</b>	Core	<b>17P3PHC8</b>	<b>Solid State Physics</b>	<ul style="list-style-type: none"> <li>This course deals with theoretical aspects of band theory, lattice vibration, dielectrics, ferroelectrics, superconductivity.</li> </ul>
	Core	<b>17P3PHC9</b>	<b>Quantum Mechanics</b>	<ul style="list-style-type: none"> <li>To gain the knowledge about quantum mechanics.</li> <li>To introduce the ideas of relativistic quantum mechanics.</li> </ul>
	Core	<b>17P3PHC10</b>	<b>Microcontroller- Programming and Applications</b>	<ul style="list-style-type: none"> <li>To introduce the concepts of microcontroller programming.</li> <li>To gain the knowledge about microcontroller based applications.</li> </ul>
	Core	<b>17P3PHC11</b>	<b>Biomedical Instrumentation</b>	<ul style="list-style-type: none"> <li>To introduce the knowledge in Biomedical Instrumentation.</li> </ul>
	Core	<b>17P3PHCP3</b>	<b>Major Practical - III</b>	<ul style="list-style-type: none"> <li>Students acquire skills in writing and executing assembly language programs (microcontroller) and C++ programs.</li> </ul>
	EDC	<b>17P3PHEDC</b>	<b>Extra Disciplinary Course</b> <b>Fundamentals of Nanotechnology</b>	<ul style="list-style-type: none"> <li>Students acquire knowledge and problem solving skills in quantum mechanics.</li> </ul>
	Core	<b>17P4PHC12</b>	<b>Atomic and Molecular Spectroscopy</b>	<ul style="list-style-type: none"> <li>To have a knowledge on the applications of Spectroscopy.</li> <li>To understand spectroscopy on the basis of quantum mechanics.</li> </ul>

<b>IV</b>	<b>Core</b>	<b>17P4PHC13</b>	<b>Nuclear Physics</b>	<ul style="list-style-type: none"> <li>• To understand the basic properties of nucleus.</li> <li>• To have an idea on the nature of nuclear forces.</li> <li>• To gain the knowledge on elementary particles.</li> </ul>
	<b>Core</b>	<b>17P4PHCP4</b>	<b>Major Practical - IV</b>	<ul style="list-style-type: none"> <li>• To gain practical knowledge by applying the experimental methods to correlate with the physics theory.</li> </ul>
	<b>Major Elective</b>	<b>17P4PHEL3A 17P4PHEL3B</b>	<b>Advanced Optics Radiation Physics</b>	<ul style="list-style-type: none"> <li>• To enhance the knowledge about optics.</li> <li>• To acquire the basic concepts of nonlinear optical materials.</li> <li>• To know the advanced concepts of laser &amp; Fiber optics.</li> </ul> <p>(or)</p> <ul style="list-style-type: none"> <li>• To gain the knowledge in radiation physics.</li> </ul>
	<b>CN</b>	<b>17P4PHCN</b>	<b>Comprehension</b>	<ul style="list-style-type: none"> <li>• To better for the preparations of Competitive Exams in advance.</li> </ul>
	<b>PR</b>	<b>17P4PHPR</b>	<b>Project</b>	<ul style="list-style-type: none"> <li>• Undertake problem identification, formulation and solution.</li> <li>• Demonstrate the knowledge, skills and attitudes.</li> </ul>