

**DEPARTMENT OF PHYSICS**  
**SOUTH EAST MANIPUR COLLEGE, KOMLATHABI**  
**BSC PHYSICS, NEP 2020**

**Course Objectives:**

- To develop a comprehensive understanding and knowledge of Physics.
- To perform experiments leading to realize the laws and concepts of Physics.
- To expose students to the fundamental computational physics skills enabling them to solve a wide range of physics problems.
- To develop scientific orientation, enquiring spirit, problem solving skills and values which foster rational and critical thinking.
- To develop interest and skills for undergoing further studies and research in Physics and related areas, or in interdisciplinary/multidisciplinary areas.
- To equip the students with needed skills so as to meet the requirements of diverse career opportunities and be successful professionals.

**Learning Outcomes:**

After completion of the course, the students will

- acquire an efficient and articulate understanding of the fundamental concepts of basic Physics in areas such as Mechanics, Electricity and Magnetism, Waves and Optics, Thermal Physics, Statistical Mechanics, Quantum Mechanics, Electronics, Mathematical Physics, Atomic and Molecular Physics, Nuclear Physics, Solid State Physics, etc.
- learn to design and perform experiments, analyse and interpret data making suitable error estimates and scientific report writing.
- acquire the fundamental computational skills on C++ computer programming and numerical computation using Scilab/Python software for solving wide range of problems related to Physics.
- develop an understanding of basic principles of electricity and its household applications, electrical wiring and installation.
- develop awareness and understanding of radiation hazards and its safety measures and gain comprehensive knowledge of interaction of matter with different nuclear radiations.
- know the design and functional performance of electronic circuits using various semiconductor devices.
- acquire advanced concepts in quantum physics and apply to solve problems of the sub-atomic world.