



JECRCTM
UNIVERSITY
BUILD YOUR WORLD

CBCS Based M. Sc. (Physics)
PROGRAM OBJECTIVES

Department of Physics

Faculty of Sciences

Session: 2021-2023

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- I. Graduates will demonstrate proficiency in critical thinking and analysis as they relate to physics problems in core theoretical areas of mechanics, electromagnetism, quantum mechanics, and statistical mechanics.
- II. Graduates will demonstrate familiarity with the major fields of modern physics research.
- III. Graduates will demonstrate capability for conducting independent research.

PROGRAM OUTCOMES (PO's)

A postgraduate of the M.Sc. (Physics) Program will demonstrate:

- I. **Critical Thinking:** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
- II. **Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
- III. **Social Interaction:** Elicit views of others, mediate disagreements and help reach conclusions in group settings.
- IV. **Effective Citizenship:** Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
- V. **Ethics:** Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
- VI. **Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development.
- VII. **Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context sociotechnological changes.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO-1: The course structure is designed with a due emphasis on wider conceptual base, including experiments and modern computational techniques.

PSO-2. With the importance of “Energy Crisis” in the world, a course on “Energy Studies and Non-Conventional Energy Sources” has been prescribed in the syllabus of M.Sc. III Semester to update the students with problems, challenges and the possible solutions of the energy crisis.

PSO-3. The program aims to train future generations of physicists with specialization in one of the frontier areas of research, e.g. in Astrophysics and Cosmology/ Atomic and Nuclear Physics/ Atmospheric Physics and Weather Science/ Quantum Information Sciences/ Energy Studies etc.