SANGAM UNIVERSITY

M.SC. PHYSICS

Program Educational Objectives (PEOs):

PEO-1: Postgraduate will have significant prospects in the various fields like academics, industry, research organization, consultancy, defence and entrepreneurial pursuit at national and international level.

PEO-2: Postgraduate will achieve peer recognition as an individual or team member having specialized knowledge and expertise to identify, formulate, investigate, analyze and implement on the problems in physical sciences.

PEO-3: Postgraduate will have a solid foundation for academic excellence and quality leadership to meet the challenges in interdisciplinary and multi-disciplinary environment.

PEO-4: Postgraduate will have ability to adopt, absorb and develop innovative and new technology in physical sciences and related areas through lifelong learning process.

PEO-5: Postgraduate will inculcate value system and work ethically in a multidisciplinary environment, to enhance the advancement in physics in general and contribute significantly through their critical thinking and scientific competence

PROGRAM OUTCOMES [PO'S]

PO-01. Scientific knowledge: Apply the knowledge of basic science fundamentals to the solution of complex scientific problems.

PO-02:Problem analysis: Identify, formulate, review research literature, and analyze complex scientific problems reaching substantiated conclusions using principles of Physic, Chemistry, Mathematics, Zoology, Botany, Geo-Informatics, and Applied Sciences.

PO-03:Design/development of solutions: Design solutions for complex scientific problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO-04.Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO-05. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern chemical IT tools including prediction and modeling to complex chemical activities with an understanding of the limitations.

PO-06. Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO-07. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO-08. Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them

PO-09. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO-10: 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.

PO-11. Project management and finance: Demonstrate scientific knowledge with the understanding of the management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO-12 Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context research, scientific and technological change.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO-1: Have fundamental and advanced level knowledge in physics particularly classical mechanics, quantum mechanics, statistical mechanics, nuclear and high energy physics, solid state physics, materials science and electronics.

PSO-2: Have fundamental and advanced level knowledge in physics so as to handle the computational tools and Scientific software.

PSO-3: Be able to apply experimental expertise in basic as well as advanced areas of physics.

PSO-4: Have necessary skills and expertise in field of research and development.