Programmes

Bachelor of Science (Honours with Research) in Mathematics

Course Intensity: Full Time Programme

Duration: 4 years

About the programme:

Mathematics is a useful tool to solve problems in science, engineering and society. With the advent of computer age, application of Mathematics has been accelerated exponentially to solve problems in the field of Science, Engineering &Technology, Medical, Space Science, Economics, Business, Management and Environment. The objective of this program is to develop a sound basis in Mathematics and to kindle the students' interest in possible areas of application by developing an appreciation of the diversity of Mathematics. The program is about the intricacies of the mathematical concepts and theories applied in the real-life situations like data analysis, statistics, economics, business and banking, artificial intelligence etc. The program has a judicious mix of courses in algebra, calculus, analysis, geometry and demandable programming languages & software tools that are required to become a skilled professional. This programme will focus to enhance the skills of the students towards future research and other prospectives.

Eligibility: XIIth with Science with minimum 50% marks with Mathematics as one of the subjects.

Tuition fee per annum: 50000

Exam fee per annum: 15000

Programme Objectives (POs):

1. PO1: Critical thinking and analytical reasoning: Acquire ability of critical thinking and logical reasoning and capability of recognizing and distinguishing the various aspects of real-life problems.

2. PO2: Conduct investigations of complex research 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.

3. PO3: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern scientific and IT tools including prediction and modelling to complex scientific activities with an understanding of the limitations.

4. PO4: Communication: Communicate effectively on scientific activities with the community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

5. PO5: Environment and sustainability: Understand the impact of the professional scientific solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

6. PO6: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the scientific practice.

7. PO7: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

8. PO8: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcomes (PSOs):

1. Disciplinary Knowledge: Apply the knowledge of mathematical concepts and applications in the field of algebra, analysis, computational techniques, optimization, differential equations, engineering, Data science and several other branches of pure & applied mathematics to the solution of complex problems.

2. Problem Analyzing: Develop an ability to analyze the problems, identify and define appropriate computing requirements for its solutions and enhances overall development and also equip with mathematical modelling ability, problem solving skills.

3. Formulation and Design: Handle the advanced techniques in algebra, analysis, computational techniques, optimization, differential equations, engineering, Data Science, Computational mathematics to analyze and design algorithms solving variety of problems related to real life problems.

Programme Educational Objectives (PEOs):

1. PEO1: Be successful professionals in Academia, Industry, Government and Entrepreneurship.
2. PEO2: Pursue higher education/research at institute of national and international repute.
3. PEO3: Effectively address the challenges of the society and undertake the projects for bridging the gap between industry and societal needs.

Program Structure:

https://drive.google.com/drive/u/1/folders/1cmdYynl7HMH2wzrapvzF4rJNfhDo-Bn1