Programme Outcome (PO): B.Sc. Mathematics (CBCS)

After successful completion of the undergraduate Mathematics programme, a student will be able to:

PO1: Foundational Knowledge in Mathematics

Demonstrate comprehensive knowledge of core mathematical areas including Algebra, Calculus, Real Analysis, Differential Equations, and Linear Algebra, enabling a solid grounding in both theory and computation.

PO2: Analytical and Logical Thinking

Apply mathematical reasoning to analyze and solve problems. Develop critical thinking and logical deduction skills necessary for mathematical proof and argument construction.

PO3: Mathematical Modeling and Problem Solving

Formulate and solve real-world problems using differential equations, numerical methods, and multivariate calculus. Translate physical or theoretical situations into mathematical models.

PO4: Abstract and Structural Understanding

Understand and work within abstract mathematical structures such as groups, rings, fields, and vector spaces. Apply the principles of structure and symmetry in pure mathematics.

PO5: Computational Proficiency and Tools Usage

Use numerical and computational techniques effectively, including the application of software or algorithms to solve mathematical problems. Demonstrate accuracy in approximations and error analysis.

PO6: Communication and Interpretation

Communicate mathematical ideas effectively using precise language, symbolic notation, and logical structure. Interpret and present data, formulas, and models clearly.

PO7: Research and Analytical Skills

Engage in independent inquiry and apply mathematical concepts in exploring advanced topics such as Complex Analysis, Metric Spaces, and Series of Functions.

PO8: Application in Interdisciplinary Domains

Apply mathematical tools and techniques in allied areas such as Physics, Computer Science, Finance, and Engineering. Understand the role of mathematics in modeling economic systems and physical phenomena.

PO9: Ethics and Professionalism

Demonstrate integrity and objectivity in mathematical work, ensuring accuracy, reproducibility, and ethical usage of knowledge and computational resources.

PO10: Lifelong Learning and Career Readiness

Develop the capacity for independent learning and adaptability to pursue higher studies, research, teaching, or careers in data analysis, actuarial science, finance, IT, and education sectors.