

B. Sc. Mathematics

Vision

To develop globally competent mathematicians through industry-linked, research-focused, technology-enabled seamless higher education in Mathematics and mould the young minds to serve for the betterment of the society with love and justice.

Mission

- Offer Competent and comprehensive curriculum and conducive environment for holistic development.
- Inculcate passion for research and perform widely recognized outstanding research in the fields of Mathematics, Statistics and the interdisciplinary areas
- Collaborate globally, construct industry academia link and contribute for nation building

Programme Outcomes

- 1. Analyze problems and formulate appropriate mathematical models in various areas of Mathematics.
- 2. PO2: Demonstrate knowledge and understanding of pure and applied Mathematics in other disciplines of basic sciences, where the problem-solving techniques are required.
- 3. Express thoughts and ideas of mathematical statements which are validated by establishing the proofs using rigorous mathematical arguments.
- 4. Employ confidently the knowledge of mathematical software and tools for treating the complex mathematical problems and investigate scientific data.
- 5. Create mathematical models of empirical or theoretical phenomena in domains such as physical, natural, or social science.
- 6. Analyze given quantitative and qualitative data by employing different measures, draw conclusions using appropriate mathematical solving methods and communicate effectively.
- 7. Demonstrate critical thinking, creativity and lifelong learning necessary for various employment demands.
- 8. Make rigorous mathematical arguments, including how to prove and disprove conjectures.
- 9. Practice moral and ethical values in all walks of life and meet community expectations.

Programme Specific Outcomes

- 1. Identify, determine, evaluate and effectively solve the practical problems using Mathematical arguments in a logical and technical manner.
- 2. Exhibit knowledge and understanding in o areas of Mathematics, Statistics, computational packages and programming languages.
- 3. Critically analyze and solve real world problems that are expressed in terms of equations, numbers, algebraic structures, etc.
- 4. Formulate and use quantitative models to address problems arising in social science, business and other areas of science and technology.

BISHOP HEBER COLLEGE (AUTONOMOUS) TIRUCHIRAPPALLI – 620017 TAMILNADU, INDIA

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Programme Outcomes

- 1. Analyze and apply the mathematical concepts in all fields leading to new research outcomes.
- 2. Solve the real-world problems that demand logical thinking and reasoning.
- 3. Demonstrate knowledge and understanding of mathematical concepts and establish proofs in terms of mathematical arguments
- 4. Identify, formulate and analyze the complex problems using the principles of Mathematics.
- 5. Represent mathematical information numerically, symbolically, graphically, verbally and visually using appropriate technology.
- 6. Exercise abstract reasoning and make ideas precise by formulating them mathematically.
- 7. Demonstrate critical thinking, leadership qualities through self-directed and life-long learning.
- 8. Collaborate with people across the world productively and contribute effectively to the scientific community.
- 9. Practice moral and ethical values with the responsibility of fulfilling the civic duty as per the societal expectations.

Programme Specific Outcomes

- 1. Comprehend and write effective reports and design documentation related to Mathematical research and literature and make effective presentations.
- 2. Investigate and solve Mathematical problems of statistics, optimization techniques required in science, technology, business and industry, and illustrate the solutions using symbolic, numeric, or graphical methods.
- 3. Integrate Mathematical knowledge and computational skills appropriate to professional activities.
- 4. Exhibit innovative skills to work effectively in the fields of Finance, Science and Technology and interdisciplinary domains.