



Program Booklet

Department of Computer Science and Engineering

Birla Institute of Technology, Mesra, Ranchi, Jharkhand

Master of Computer Applications



Institute Vision

To become a Globally Recognized Academic Institution in consonance with the social, economic and ecological environment, striving continuously for excellence in education, research and technological service to the National needs.

Institute Mission

To educate students at Undergraduate, Postgraduate, Doctoral, and Post-Doctoral levels to perform challenging engineering and managerial jobs in industry.

- To provide excellent research and development facilities to take up Ph.D. programmes and research projects.
- To develop effective teaching and learning skills and state of art research potential of the faculty.
- To build national capabilities in technology, education and research in emerging areas.
- To provide excellent technological services to satisfy the requirements of the industry and overall academic needs of society.

Department Vision

The department strives to be recognized globally for outstanding education and research, leading to excellent professionals and innovators in the field of Computer Science and Engineering, who can positively contribute to the society.

Department Mission

- To impart quality education and equip the students with strong foundation that could make them capable of handling challenges of the new century.
- To maintain state of the art research facilities and facilitate interaction with world's leading universities, industries and research organization for constant improvement in the quality of education and research.

Programme Educational Objectives (PEOs):

Master of Computer Applications

PEO 1: To build scalable, high-quality applications using modern engineering practices.

PEO 2: Develop ethical leadership and professional integrity while fostering a collaborative team spirit.

PEO 3: To be prepared for advanced studies, teaching, and research while fostering innovation to contribute to national growth.

PROGRAM OUTCOMES (POs) for MCA (MASTER OF COMPUTER APPLICATIONS)

PO1 (Foundation Knowledge):

Apply knowledge of mathematics, programming logic and coding fundamentals for solution architecture and problem solving.

PO2 (Problem Analysis):

Identify, review, formulate and analyse problems for primarily focussing on customer requirements using critical thinking frameworks.

PO3 (Development of Solutions):

Design, develop and investigate problems with as an innovative approach for solutions incorporating ESG/SDG goals.

PO4 (Modern Tool Usage):

Select, adapt and apply modern computational tools such as development of algorithms with an understanding of the limitations including human biases.

PO5 (Individual and Teamwork):

Function and communicate effectively as an individual or a team leader in diverse and multidisciplinary groups. Use methodologies such as agile.

PO6 (Project Management and Finance):

Use the principles of project management such as scheduling, work breakdown structure and be conversant with the principles of Finance for profitable project management.

PO7 (Ethics):

Commit to professional ethics in managing software projects with financial aspects. Learn to use new technologies for cyber security and insulate customers from malware.

PO8 (Life-long learning):

Change management skills and the ability to learn, keep up with contemporary technologies and ways of working.