



**BIRLA INSTITUTE OF TECHNOLOGY
MESRA
RANCHI, INDIA**

CHOICE BASED CURRICULUM

Computer Science and Engineering

P.G Programme

(Master of Computer Applications)



Department of Computer Science & Engineering **Birla Institute of Technology, Mesra, Ranchi - 835215 (India)**

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 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.

Program Educational Objectives (PEOs)

PEO1: To excel in software development skills coveted in the IT industry.

PEO2: To be well prepared for pursuing higher studies in related fields of teaching and research.

PEO 3: To be aware of the requirements of being an ethical and professional leader and inculcating team spirit.

PEO4: To inculcate the ability to innovate and contribute towards the growth of the nation.

Programme Outcomes (POs)

PO1: Attain problem solving attitude in systematic and timely manner.

PO2: Apply knowledge of mathematics, algorithms and computing principles appropriately to solve real-world problems.

PO3: Identify modern tools and techniques through critical thinking for design and development of solutions.

PO4: Conduct investigations of complex problems by applying critical thinking and problem-solving skills.

PO5: Use computational resources efficiently to develop software for industry needs.

PO6: Apply analytical and problem-solving skills for the betterment of society.

PO7: To assess environmental, safety and legal norms for sustainable computing practices.

PO8: Understand and assess societal and ethical norms for professional computing practices

PO9: Function as an individual or as a member in a team in the software domain.

PO10: Acquire effective communication skills required to communicate with all the stakeholders.

PO11: Excel in descriptive oral, written communication and presentation skills required for documenting and delivering project artefacts effectively.

PO12: Recognize the need for self-motivation, learning and unlearning to engage in life-long learning for continual development.

Programme Specific Outcomes (PSOs)

PSO1: Analyse and apply knowledge of computer applications, mathematics, and science to solve real world problems.

PSO2: To fabricate (or create) value and wealth for the betterment of individuals and society by developing cutting edge technologies or applications.

PSO3: Apply current technologies, skills, and models to solve problems and for exhibiting social welfare concerns and professional ethics of the IT industry.