

**M.TECH. CSE WITH SPECIALIZATION IN ARTIFICIAL INTELLIGENCE
AND ROBOTICS**

PROGRAMME EDUCATIONAL OBJECTIVES
PROGRAMME OUTCOMES
PROGRAMME SPECIFIC OUTCOMES

**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND 4 IR TECHNOLOGIES
UNIVERSITY SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY
GAUTAM BUDDHA UNIVERSITY, GREATER NOIDA, UP, INDIA**

PROGRAM EDUCATIONAL OBJECTIVES : M.TECH. CSE WITH SPECIALIZATION IN ARTIFICIAL INTELLIGENCE AND ROBOTICS

DAI4IRT PEO 1:

To develop students with in-depth knowledge of Artificial Intelligence, knowledge engineering, robotics, embedded systems and various other sub fields related to artificial intelligence which will provide a strong foundation to pursue a career in education and AI based industry for innovation, research and development.

DAI4IRT PEO 2:

To develop leadership qualities, to lead and work in a team in a professional environment, demonstrate professional integrity and feel responsibility towards the country at an appropriate level in order to address the issues in a responsive, ethical and innovative manner.

DAI4IRT PEO 3:

To excel in career involving higher order and challenging tasks and try to become a part of success and growth and work in collaboration with all organisation.

DAI4IRT PEO 4:

To produce students who are effective in multidisciplinary research and environment by showing their active participation for betterment of society.

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DAI4IRT PO 1: Engineering Knowledge

Apply the engineering knowledge of mathematics, science, engineering fundamentals with engineering specialization to the solution of complex engineering problems.

DAI4IRT PO 2: Problem Analysis

Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

DAI4IRT PO 3: Design and Development of Solutions

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

DAI4IRT PO 4: Conduct Investigations of Complex 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.

DAI4IRT PO 5: Modern Tool Usage

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

DAI4IRT PO 6: The Engineer and Society

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

DAI4IRT PO 7: Environment and Sustainability

Understand the impact of the data science and statistical learning and its impact on the societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

DAI4IRT PO 8: Ethics

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

DAI4IRT PO 9: Individual and Teamwork

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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DAI4IRT PO 10: Communication

Communicate effectively on complex engineering activities with the engineering 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.

DAI4IRT PO11: Project Management and Finance

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

DAI4IRT PO12: 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.

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DAI4IRT PSO1:

Experiment and prepare programming concepts and provide new ideas and innovations towards research and societal issues in the field of data science.

DAI4IRT PSO2:

Analyse and develop computer systems using Artificial Intelligence, robotics, 3D printing internet of things, fog and edge computing, big data analytics, block chain, artificial intelligence enabled cyber security and networking for efficient design of computer-based systems of varying complexity. Finally artificial intelligence can and is already being used for problem solving and making better and quick decisions.

DAI4IRT PSO3:

Apply standard and advanced Artificial Intelligence based concepts for pattern recognition, speech recognition, computer vision and other high end practices and strategies in order to develop sustainable products. These quality products can further be used for Business, Education and Training and/or E-governance.