

Programme Educational Objectives (PEO)

Name of Programme: Bachelor of Technology (Artificial Intelligence and Data Science). A graduate in the discipline of Artificial Intelligence and Data Science is generally expected to have three kinds of knowledge. First, the graduate should have conceptual knowledge of the core topics of Computer Science. Second, she/he should have knowledge of mathematical formalism underlying various programming concepts. Third, graduates in the discipline of Artificial Intelligence and Data Science should have the knowledge of the state of the technologies and tools so that he/she can apply the principles of Artificial Intelligence and Data Science to solve real-life problems from diverse application domains. The programme of B.Tech in Artificial Intelligence and Data Science at Dr. Babasaheb Ambedkar Technological University (DBATU) essentially aims to meet these broad expectations. At the same time, the program intends to comply with the courses and syllabus available at National Program on Technology Enhanced Learning (NPTEL) and SWAYAM. The following specific educational objective aims to achieve these global and regional expectations.

Objective Identifier	Objectives
PEO1	To equip graduates with a strong foundation in engineering sciences and Artificial Intelligence and Data Science Engineering fundamentals to become effective collaborators, researchers and real-time problem solver with technical competencies.
PEO2	Perceive the limitation and impact of engineering solutions in social, legal, environmental, economic and multidisciplinary contexts.
PEO3	Excel in Industry/technical profession, higher studies, and entrepreneurship exhibiting global competitiveness

Programme Outcomes (PO)

After undergoing the learning process of four years, students of B.Tech. (Artificial Intelligence and Data Science) at Dr. Babasaheb Ambedkar Technological University will have an ability to build information systems and provide computer based solutions to real life problems. The graduates of this programme will demonstrate following abilities and skill sets.

Outcome Identifier	Outcomes
PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/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.
PO4	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.
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6	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.
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	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.
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.
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.

Program Specific Outcomes (PSOs)

Outcome Identifier	Outcomes
PSO1	Apply the fundamentals of science, mathematics and engineering knowledge to design, development, formulates and investigate complex engineering problems related to application area in Artificial Intelligence and Data Science.
PSO2	Provide exposure to latest tools and technologies and aware of the impact of professional engineering solution in environmental, societal, professional ethics and able to communicate effectively.
PSO3	To publish research paper and think, innovates in artificial intelligence, machine Learning and Data Science domain