



جامعة الأمير
مقرن بن عبدالعزيز
University of Prince Mugrin

Artificial Intelligence (AI) program



Overview of AI Department

The Bachelor of Artificial Intelligence (AI) program at UPM is designed to address the rapid advancements in AI and related disciplines. It aims to lead AI education in the Kingdom and gain global recognition as a hub of knowledge, expertise, and innovation. The program prepares graduates to become skilled practitioners and innovators, meeting the increasing demand in both local and international markets.

Mission

To graduate professionals in Artificial Intelligence by offering state-of-the-art knowledge and conducting innovative research projects with a focus on the rapidly growing demand of society.

Program Educational Objectives

The Program Educational Objectives (PEOs) of the Artificial Intelligence program describe the expected accomplishments of graduates a few years after completing the program:

- PEO1: Graduates will demonstrate expertise in AI, achieving success through notable innovative accomplishments in AI applications across industry, government, and academia.
- PEO2: Graduates will effectively communicate and collaborate in multidisciplinary teams, upholding professionalism and ethical standards while making meaningful contributions to society.
- PEO3: Graduates will assume leadership roles, driving innovation and strategic thinking in AI, leading research initiatives, and advancing their organizations and communities.
- PEO4: Graduates will engage in continuous learning through graduate studies, professional courses, self-study, and research, enhancing their AI skills and adapting to the evolving needs of organizations and communities.

Student Outcomes

The Artificial Intelligence Program adopts the following Student Outcomes:

- SO1: Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
- SO2: Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- SO3: Communicate effectively in a variety of professional contexts.

- SO4: Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- SO5: Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- SO6: Apply AI theory and techniques to produce computing-based solutions.

Partnerships

A partnership with Purdue University, German Research Center for Artificial Intelligence (DFKI), Prince Sultan University, Alfaisal University, Prince Sultan Defense Studies and Research Center.

Possible job opportunities

| JOB ROLE | JOB DESCRIPTION |
|---|--|
| MACHINE LEARNING ENGINEER | Develop algorithms and models to enable machines to act without being explicitly programmed for specific tasks. |
| AI SPECIALIST | Implement and optimize AI models for various applications. |
| AI RESEARCH SCIENTIST | Conduct high-level research in AI, developing new theories, technologies, and algorithms to advance the field. |
| DATA SCIENTIST | Use statistical methods, machine learning, and analytics to extract insights from data to inform business decisions and strategy. |
| NATURAL LANGUAGE PROCESSING ENGINEER | Work with human language data, developing systems that enable computers to understand, interpret, and generate human languages. |
| ROBOTICS ENGINEER | Design and develop robotic systems that can perform tasks autonomously or semi-autonomously. |
| COMPUTER VISION ENGINEER | Develop systems and applications that can process, analyze, and make decisions based on visual data. |
| AI CONSULTANT | Provide expertise and guidance to businesses looking to implement AI solutions, helping them to solve complex problems and improve operations. |
| AUTONOMOUS VEHICLE SYSTEMS ENGINEER | Design and develop systems for self-driving vehicles, including perception, decision-making, and vehicle control systems. |

Professional Job sectors

- IT companies
- Data offices
- Finance and banking
- Healthcare
- Retail and e-commerce
- Manufacturing and logistics
- Government agencies
- Consulting firms
- Education and research institutions

Why students should join the program

Joining UPM's AI program provides a unique opportunity to excel in a rapidly evolving field through:

- **Comprehensive Curriculum:** with a curriculum that bridges theory with practical and hands-on projects, students are prepared for real-world challenges.
- **Advanced Infrastructure:** Access to advanced labs, like the Deep Learning Lab, Robotics Lab, and AR/VR Lab, provides students with unique hands-on learning experience.
- **Research and Innovation:** The program encourages active participation in advanced research, adopting an environment of innovation and discovery.
- **Diverse Career Opportunities:** Graduates have a broad range of job opportunities, from machine learning engineers to AI specialists, in high-growth sectors like IT, healthcare, and finance.
- **Industry Relevance:** The program is designed to meet the growing demand for AI professionals both locally and globally.
- **Global Recognition:** The program aims for local and international acknowledgment as a hub of knowledge, innovation, and expertise in Artificial Intelligence, making its graduates highly preferred.
- **Professional Development:** The graduates will gain technical skills, ethical awareness, and lifelong learning capabilities to make significant contributions to society.

