

1. What language is used for teaching in the Department of Artificial Intelligence and Data Engineering at Özyeğin University?

The language is 100% English.

2. Why should I choose the Department of Artificial Intelligence at your university?

The Department of Artificial Intelligence and Data Engineering at Özyeğin University aims to educate engineers who will design and develop artificial intelligence systems and become important players in the new world. With an internationally recognised, expert academic staff, the department provides students with up-to-date and world-class education. Thanks to our strong faculty working in different areas of Artificial Intelligence, you can gain comprehensive knowledge in different areas of Artificial Intelligence. If you have research potential, you can also contribute to research at an international level in the research laboratories of our professors. Our professors collaborate with researchers abroad, regularly follow prestigious international AI conferences and motivate and guide our students in competitions and events in this field. In addition, thanks to the industrial collaborations of our professors, you can get to know companies working in the field of AI in Turkey and have the opportunity to participate in their projects.

Compared to existing Artificial Intelligence and Data Engineering departments, we emphasize programming and aim to provide a solid programming foundation. For example, we start with the Java programming language and continue with C++ and Python. We also carefully cover the algorithm design, which is the foundation of programming.

3. Do you offer opportunities for research projects in the field of artificial intelligence outside the curriculum? Can students participate in research projects?

Özyeğin University provides enthusiastic and curious students the opportunity to participate in research projects with academics before they reach their final year of study. These students are offered the opportunity to participate in relatively larger research projects in addition to sectoral internships. Furthermore, students can work closely with their professors on research-oriented projects in their final year projects.

4. What courses are taught in the AI degree programme and what topics do these courses cover? Are there electives or optional courses to customize the diploma programme?

In our AI department, in addition to basic programming and engineering courses, we offer courses such as Modeling, Data Science, Machine Learning, Deep Learning, Artificial Intelligence, Big Data and Cloud Computing, Operations Research, Natural Language Processing and Reinforcement Learning. We also strive to offer a rich programme of electives such as Computer Vision, Human-Agent Interaction, Decision Making in Multi-Agent Systems, AI in Finance and Bioinformatics.

As the AI department is already specialized by definition, there is currently no option for customization of the degree programme.

5. What is the department's laboratory and technology infrastructure?

The lab and technology infrastructure in our department is quite good. We have two main computer labs that are shared with the Computer Engineering department for undergraduate courses and exams. In addition to these general computing labs, students who wish to

participate in research projects with their professors have access to the Cognitive Robotics and Robot Learning, Computer Vision and Image Processing, and Interactive Intelligent Systems labs. These labs are equipped with humanoid robots (NAO, QTRobot, Sanbot), advanced interfaces and computing infrastructures. In addition to these labs, students can conduct research with domain expert professors in the research labs of "Financial Data Processing by Machine Learning" and "Natural Language Processing and Text Mining".

6. What support do you offer students in terms of career planning and job placement after graduation?

After graduation, our alumni office supports students with career planning. In addition, many of our graduates are able to find employment through the training they have received and the practical experience they have gained during their internships. We plan to set up an email group with our graduates where professors will share job postings they receive.

7. In what areas do graduates of the AI department have job opportunities? What types of jobs are they trained for?

Graduates of the Artificial Intelligence and Data Engineering Undergraduate Programme are trained to work in all sectors where AI technologies can be used, in the design and development process of intelligent systems, in academia, in research and development departments or in data science departments. They can work in banking, retail, healthcare, defense, automotive, consumer electronics and gaming, among others. In addition, some of our students prefer to stay in the academic world. A large number of our students continue their master's and doctoral studies at very prestigious universities in Turkey and abroad.

8. What opportunities do students in the AI department have to study or research abroad? Do you have international exchange programmes or partnership agreements?

Students who have previously worked with our professors have continued their master's and doctoral studies at top universities abroad. Some examples of these universities are the University of Rochester, the University of Arizona, the University of Southampton, University College London, the University of Michigan, UC San Diego and the Technical University of Munich. In terms of AI exchange programmes, we have exchange agreements with leading universities in countries such as the United States, Germany, Italy, Spain, France, Hungary and South Korea.

9. Which Master's or doctoral programmes can graduates of the department complete?

Our graduates can continue to pursue master's and doctoral programmes in various fields, especially in Artificial Intelligence and Computer Engineering. In addition, Özyeğin University offers a Master's programme in Artificial Intelligence and Data Engineering.

10. Who are the lecturers in the field of Artificial Intelligence and what are their areas of expertise?

Our full-time AI lecturers include Reyhan Aydoğan, Olcay Taner Yıldız, Hasan Fehmi Ateş, İlknur Karadeniz Erol, Emre Sefer, Erhan Öztop and Erinç Albey. In addition, prominent AI experts such as Ethem Alpaydın, Furkan Kıraç, İsmail Arı, İsmail Aktürk, Cenk Demiroğlu and Çiğdem Eroğlu Erdem support the department.

More detailed information about our full-time staff:

Reyhan Aydođan received her PhD in Computer Engineering from Bođaziđi University in 2011 and subsequently conducted postdoctoral research at the Interactive Intelligence Research Group of Delft University of Technology. She has participated in research collaborations in the Netherlands, Spain, Norway, the USA and Japan. Aydođan has been a member of programme committees for prestigious international AI conferences and organized workshops and competitions. She involves Özyeđin University students in international collaborations on intelligent systems, decision making and recommender systems.

Hasan F. Ateş conducted research at Princeton and Rice Universities in the USA before continuing his academic career in Turkey. He has worked with leading Turkish companies in various sectors and his students have graduated from some of the best universities in the world. Ateş focuses on computer vision and applications of deep learning in his projects and shares this knowledge with the students of Özyeđin University.

İlknur Karadeniz was a postdoctoral researcher in the field of natural language processing at the University of Cambridge. Since joining Özyeđin University in 2023, she has been teaching courses on NLP, bioinformatics and information retrieval systems and encouraging students to participate in international competitions. Karadeniz has collaborated with researchers from top universities such as Cambridge and Michigan.

Emre Sefer received his BSc from Bođaziđi University, his MSc from the University of Maryland and his PhD from Carnegie Mellon University in Computational Biology. He has worked as a quantitative strategist at Goldman Sachs and as an AI engineer at JP Morgan. Since 2020, Sefer has been focusing on AI and deep learning applications in finance and biology at Özyeđin University.

Erinç Albey holds a Bachelor's, Master's and PhD degree from the Faculty of Industrial Engineering at Bođaziđi University. He joined Özyeđin University in 2015 after conducting postdoctoral research at North Carolina State University. Albey was instrumental in establishing the OzUBEX Digital Transformation Centre and teaches optimisation, statistical learning and data-driven decision algorithms.

Erhan Öztop graduated with a double major in Computer Engineering and Mathematics from Middle East Technical University and a PhD from the University of Southern California. He has held research positions at ATR in Japan and currently heads the Cognitive Robotics Lab at Özyeđin University while holding a visiting professorship at Osaka University.

11. Which projects or applications in the field of AI are supported or emphasized by the university?

Almost every project in the field of AI is supported by our university and other funding organizations such as TÜBİTAK. Our faculty members are involved in a variety of projects including financial data analysis, natural language processing, explainable AI decision support systems, and computer vision and robotics applications in defense, healthcare and telecommunications. Undergraduate students can also participate in these projects as researchers.

12. What skills will I acquire by studying the AI programme at Özyeğin University?

Studying Artificial Intelligence at Özyeğin University not only provides you with a solid foundation in engineering, but also allows you to engage with the fundamentals of the rapidly developing field of AI. The programme will familiarize you with AI applications in various sectors. It aims to train engineers who can contribute to society, improve the common good and create sustainable, transparent solutions with human-centered hybrid intelligent systems. The programme promotes innovative and entrepreneurial researchers with an international perspective who are able to put theoretical knowledge into practice and excel in interdisciplinary and team-oriented environments.

13. Which technologies are taught in the AI programme?

The AI program focuses on programming languages such as Python and Java. In addition to programming, students also learn about practical applications such as cloud computing systems and deep learning libraries, which are crucial in the field of AI.

14. What opportunities does Özyeğin University offer its graduates?

Graduates of the Artificial Intelligence and Data Engineering Bachelor's degree programme can work in all areas where AI technologies are used, e.g. in the design and development of intelligent systems, in science, in research and development departments or in data science departments. Özyeğin University supports its graduates through an alumni office. In addition, our faculty advises students who wish to pursue an academic career at home or abroad. Graduates can also seek advice from their professors after graduation to support their careers.

15. Is it mandatory to attend the courses?

The decision to take courses is at the discretion of the instructors. However, it is highly recommended that students participate in the courses as it is critical to building a solid foundation.

16. How do Artificial Intelligence and Data Engineering differ from Computer Engineering?

Programming is fundamental to all 3 degree programmes: Computer Engineering, Software Engineering and Artificial Intelligence and Data Engineering. Graduates of these degree programmes have extensive programming skills. In addition, AI and Data Engineering require a strong math background, as math forms the basis for almost all courses. Core courses in AI, such as machine learning, deep learning and natural language processing, are mandatory, while more specialized courses are offered as electives.

Looking ahead to the next 50 years, we believe that graduates of the AI and Data Engineering programme will have promising career prospects. We aim for students who want to pursue a career in this field to learn the basics of AI early on and specialize in this area without delay.