

## OUR MISSION

The core mission of the Department of Software Engineering in the Faculty of Technology at Karadeniz Technical University is to produce qualified individuals who are capable of generating contemporary knowledge and technology using modern educational methods, possessing high application skills, and capable of producing effective solutions by employing engineering approaches within the software lifecycle to meet the needs of society and industry. We aim to educate individuals who are respectful of societal values, open to development, embracing teamwork, and equipped with universal competencies. Additionally, we strive to shape the field of software engineering through scientific research.

## Research Areas

Computer Science,  
Artificial Intelligence,  
Machine Learning and Pattern Recognition,  
Pattern Recognition and Image Processing,  
Computer Vision, Algorithms,  
Augmented Reality,  
Virtual Reality,  
Natural Language Processing,  
Human-Computer Interaction,  
Information Security and Cryptography,  
Communication and Network Protocols

## Our Laboratories

Computer Laboratory  
iOS Applications Laboratory  
System and Network Laboratory  
Android and Computer  
Hardware Laboratory



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KARADENİZ  
TECHNICAL UNIVERSITY  
Of Faculty of Technology

F.TECH



# Department Of Software Engineering

The Department of Software Engineering was established within the Faculty of Technology, in accordance with the letter dated 22.02.2011 and numbered 008075 from the Turkish Council of Higher Education. Software engineering is a new branch of engineering intertwined with disciplines such as computer science, industry, and mathematics, along with its unique topics. As an engineering discipline, the Department of Software Engineering encompasses all activities related to the design, planning, development, production, operation, and maintenance of software. Additionally, planning, management, support, and training activities related to production hold a significant position within the scope of software engineering. Software engineers design, develop, test, deploy, and manage software systems that are engineered according to engineering principles for the constantly evolving and expanding information technology sector.

Computer-aided systems are widely used in all aspects of life today. Therefore, Software Engineering has spread across a wide range and has become an increasingly important profession day by day. With this in mind, the aim of our department is to educate software engineers who possess the qualifications to meet the needs of the software industry, lead in changing global and technological conditions, contribute to developments in technology, have the required knowledge in the field both academically and in all sectors of the software industry, be inquisitive, analytical, solution-oriented, capable of teamwork, and able to identify current problems in the field. Thus, we aim to become a department that is internationally accredited, nationally and internationally recognized in the field of software, ranks at the forefront in scientific and technological fields, offers research and development and consultancy services, values university-industry cooperation, and adopts an administrative approach that does not compromise academic and ethical values.

The curriculum we have developed to achieve the goals of our department covers the topics addressed and determined by ISO and IEEE. According to these determinations, Software Engineering covers technical, artistic, and managerial issues. Graduates from the Software Engineering department are expected to acquire skills such as:

- i. Analyzing user needs and proposing appropriate solutions,
- ii. Designing appropriate solutions by integrating ethical, social, legal, and economic considerations while using engineering approaches,
- iii. Understanding and applying existing theories, models, and techniques that provide the foundation for software design, development, implementation, and validation,
- iv. Working effectively during software development, being able to lead when necessary, and communicating well with users,
- v. Following and implementing developments in relevant fields.

In our education program, students are subject to mid-term exams, mid-term studies (projects, seminars, short exams, assignments, second mid-term exams), and final exams for each course. Students who successfully complete all courses (totaling 240 ECTS credits), achieve a minimum weighted GPA of 2.0 out of 4.00, successfully complete their thesis, and pass their professional internship with a satisfactory internship report are entitled to graduate with the title of "SOFTWARE ENGINEER".

#### OUR VISION

The vision of the Department of Software Engineering in the Faculty of Technology at Karadeniz Technical University is to be one of the leading departments of software engineering in our country and the world. We envision ourselves as adherents of contemporary educational principles, equipped with advanced technological resources for strong education, teaching, application, and research capabilities, capable of nurturing competent software engineers who push the boundaries of the field through scientific inquiry.

