



Software Engineering

Field of study: Computing



Programme description

The term “software engineering” was coined in 1968, during the NATO conference in Garmish. It was used in response to the problems regarding software development that then, a still young IT sector was facing. Although more than 50 years have passed, we still observe many software development teams struggling to deliver high-quality software products on time and within the budget.

The goal of Software Engineering as a discipline is to deliver solutions that support the development of software-intensive products by applying engineering methods to their development.

Since 1998, Poznan University of Technology offers an M.Sc. program in Software Engineering. The curriculum aims at providing graduates with the necessary knowledge and skills to perform roles in three crucial areas in IT projects:

- Project management – project management methodologies, risk management, planning (size and effort estimation of software development), agile methods;
- Requirements Engineering – business process modeling, elicitation of functional and non-functional requirements for information systems, and preparation of acceptance tests, release planning & product backlog management;
- Software architecture & design – object-oriented design, software architectures, real-time systems, and software testing.

An important element of the curriculum is the Software Development Studio (SDS). This is a very practical form of studying. During the SDS course, students are involved in projects delivering real software for real customers. Therefore, they have an opportunity to use different methods, standards, and tools for software development in practice. Each team is composed of four 4th-year students working towards their Bachelor’s Degree and two or three students from the M.Sc. program in Software Engineering. Fourth-year students act as designers and programmers, while the Software Engineering students are responsible for managing the project and organize the development process (e.g., act as project managers or Scrum Masters), eliciting and documenting requirements (e.g., fulfill the roles of business/system analysts or Product Owner), and preparing the software architecture of the product.

The candidates should hold a Bachelor’s Degree in Computer Science, Computer Engineering, Informatics or related fields.

Course summary:

Semester 1

- Software Design and Modeling
- Project Management
- Software Development Studio 1
- Technologies of Software Development
- Database Performance
- Communication in English / Polish
- Basics of OHS
- New Trends in Multimedia Technologies

Semester 2

- Software Architecture and Verification
- Software Development Studio 2
- Software Evolution and Maintenance
- Pre-diploma Seminar
- Quality Management and Experimental Software Engineering
- Research Project
- Scientific & Technical Writing

Semester 3

- Diploma Seminar
- IT in Administration
- Elective course 1: (Computer Science)
- Elective course (Social Sciences)
- Elective course (Humanities)
- Master thesis



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University	Poznan University of Technology Poznan, POLAND
Degree to be obtained	Master of Science
Programme website	https://www.put.poznan.pl/en
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Phone	+48 61 665 3544
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E-mail	study@put.poznan.pl
Language of instruction	English
ECTS points	90
Duration	1.5 years (3 semesters)
Programme begins	end of February
Programme ends	end of June
Deadline for application	3 months before the course starts – end of November
Education requirements	English language – level B2 (Common European Framework), Bachelor of Science degree (or equivalent) in Computer Science, Computer Engineering, Informatics or related fields. Full list of the required documents is available at: https://www.put.poznan.pl/en
Mode of instruction	Lectures, classes, laboratory classes, projects, internships

