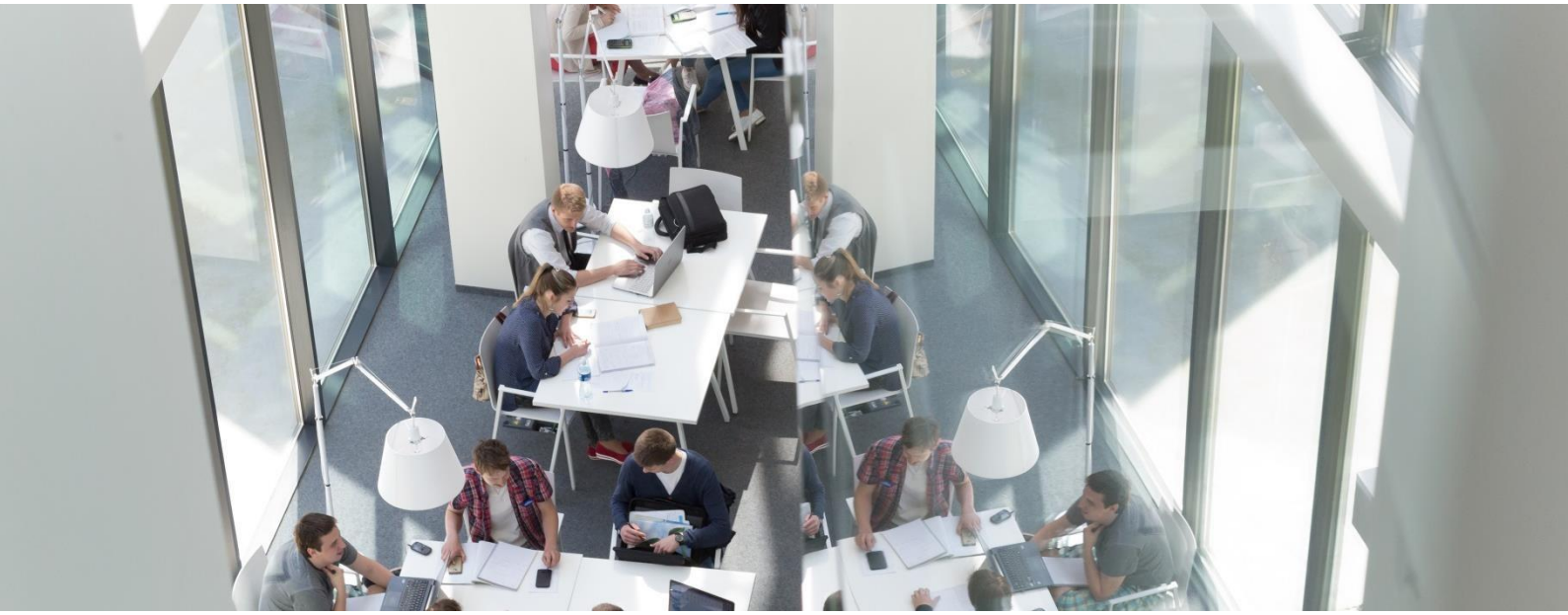

SOFTWARE ENGINEERING

Programme type	Master's studies (university)
Field of study	Software Engineering
Study area	Computing
Degree	Master's Degree in Computing
Duration	Full-time - 2 years, part time – 3 years
Workload	120
Language of instruction	English
Location	Vilnius, Lithuania
Starting date	1st of September

PROGRAMME DESCRIPTION

- *The objective*

  The purpose of the programme is to prepare high qualification software engineers that are able to carry out independently research; to lead software development, maintenance and process improvement projects; to apply their knowledge in different application areas; to make decisions under conditions of limited information, and logically, unambiguously and clearly argue them among specialists and non-specialists.

- *Career opportunities*

  A graduate is ready to work as a Project Manager in Information Technologies, as a Manager of software process improvement; in addition, as an Analyst, Designer, Programmer or Researcher in private and public sectors in Lithuania or abroad.

- *Access to further studies*

  Graduate of Informatics masters programme can continue studies in Computer Science, Software Engineering, Information Systems, and Information Technology Doctor’s degree programmes.

KEY LEARNING OUTCOMES

Graduate of Software Engineering programme has acquired technical and managerial competence, is capable to manage software development, maintenance and process improvement projects, to apply his/her knowledge in new and multidisciplinary environments, to formulate judgements with limited information and to communicate to various audiences, has the ability to integrate knowledge and skills to perform research.

COURSE INFORMATION

The full-time programme has the following structure:

<table>
<tr><th>Course Type</th><th>1st Semester</th><th>2nd Semester</th><th>3rd Semester</th><th>4th Semester</th></tr>
<tr><td rowspan="5">Compulsory Courses</td><td>Requirements Engineering
(5 ECTS)</td><td>Software Engineering Methods and Tools
(10 ECTS)</td><td>Professional Practice
(15 ECTS)</td><td rowspan="5">Master’s Thesis
(30 ECTS)</td></tr>
<tr><td>Project Management
(5 ECTS)</td><td>Software Process Assessment and Improvement
(5 ECTS)</td><td rowspan="4">Research Work
(5 ECTS)</td></tr>
<tr><td>Software Systems Architecture and Design
(10 ECTS)</td><td rowspan="3">Research Work
(5 ECTS)</td></tr>
<tr><td>Parallel and Distributed Computing
(5 ECTS)</td></tr>
<tr><td>Research Work
(5 ECTS)</td></tr>
<tr><td rowspan="6">Elective Courses*</td><td rowspan="6"></td><td>Multidimensional Data Visualization
(5 ECTS)</td><td>Programming in Cloud Computing
(5 ECTS)</td><td rowspan="6"></td></tr>
<tr><td>User Experience Engineering
(5 ECTS)</td><td>Software Systems Testing and Configuration Management
(5 ECTS)</td></tr>
<tr><td>Enterprise Architecture Driven Development
(5 ECTS)</td><td>Electronic Signature Infrastructure and Electronic Commerce
(5 ECTS)</td></tr>
<tr><td>Software Quality
(5 ECTS)</td><td>Methods of Cryptography
(5 ECTS)</td></tr>
<tr><td>Information Security
(5 ECTS)</td><td>Object Databases
(5 ECTS)</td></tr>
<tr><td>Randomized Algorithms
(5 ECTS)</td><td>Heuristic Algorithms for NP-complete Problems
(5 ECTS)</td></tr>
</table>

*The supply of elective course might vary depending availability.

The part-time programme has the following structure:

Course Type	1st Semester	2nd Semester	3rd Semester	4th Semester	5th Semester	6th Semester
Compulsory Courses	Software Systems Architecture and Design (10 ECTS)	Software Engineering Methods and Tools (10 ECTS)	Professional Practice (15 ECTS)	Research Work (10 ECTS)	Parallel and Distributed Computing (5 ECTS)	Master's Thesis (20 ECTS)
	Project Management (5 ECTS)	Software Process Assessment and Improvement (5 ECTS)	Requirements Engineering (5 ECTS)		Project of Master Thesis (10 ECTS)	
	Research Work (5 ECTS)	Research Work (5 ECTS)				
Elective Courses*				Programming in Cloud Computing (5 ECTS)	Multidimensional Data Visualization (5 ECTS)	
				Software Systems Testing and Configuration Management (5 ECTS)	User Experience Engineering (5 ECTS)	
				Electronic Signature Infrastructure and Electronic Commerce (5 ECTS)	Enterprise Architecture Driven Development (5 ECTS)	
				Methods of Cryptography (5 ECTS)	Software Quality (5 ECTS)	
				Object Databases (5 ECTS)	Information Security (5 ECTS)	
				Heuristic Algorithms for NP-complete Problems (5 ECTS)	Randomized Algorithms (5 ECTS)	

*The supply of elective course might vary depending availability.

GRADUATION REQUIREMENTS

In order to earn Master's degree, candidates must successfully pass the exams and defend Master's Thesis.

ADMISSION REQUIREMENTS AND SELECTION CRITERIA

- At least first level studies leading with bachelor diploma are required. The general criterion for admission is to pass entry exam covering main topics of Informatics bachelor degree study program.
- English language proficiency: the level not lower than B2 (following the Common Framework of Reference for Language approved by the Council of Europe).
- Assessment of motivation and entrance examination is held by electronic means remotely.

EXAMINATION AND ASSESSMENT REGULATIONS

The main form of assessment is an examination. Every course unit is concluded with either a written or written-oral examination or pass/fail assessment. Student's knowledge and general performance during the examination are assessed by using the grading scale from 1 (very poor) to 10 (excellent).

Academic contact	Admission contact
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