



1.	Course title	Critical systems software engineering
2.	Course code	СИ-И-06
3.	Semester	10
4.	Unit offering the course	Faculty of Computer Science and Engineering
5.	ECTS	6
6.	Goals of the study programme	
	<p>This course introduces the concepts and methods for the development of "critical systems" - systems whose decline can result in endangering lives, the environment or survival of a given business. It is important that critical software is not considered isolated but as part of a larger system that includes hardware, software, people, and processes. Upon completion of the course, students will be able to: understand the basic representations of software dependencies, analyze, analyze infrastructure and its threats, develop critical software, and become familiar with existing world standards.</p>	
7.	Contents of the study programme	
	<p>Security and risk analysis, Identification of potential problems, Analysis of critical system requirements, Design principles for critical systems as redundancy, Architecture design with emphasis on reliability, sustainability and support, Development of critical systems with evaluation, Standards, Organizational aspects , The role of human error.</p>	