1.	**Course title**	Business process mining
2.	**Course code**	КН-И-10
3.	**Semester**	9
4.	**Unit offering the course**	Faculty of Computer Science and Engineering
5.	**ECTS**	6
6.	**Goals of the study programme**	
	In this course the techniques for discovering knowledge about business processes will be studied, which automatically discover business process models based on data from process events from the past. This course combines data mining and business process modeling that can be applied for automated discovery and better modeling of business processes. Various techniques that use data from past events will be studied, and they will be applied to real applications. Upon completion of this course, the students will have in-depth knowledge of intelligent business process modeling, will be able to choose appropriate techniques and apply them in real applications. Students will gain practical knowledge through case study analysis.	
7.	**Contents of the study programme**	
	Business processes, introduction, concepts, stages in business process management. Overview of business process modeling languages. Business process modeling. Collection and representation of data for business processes. Business process event logs, content and format. Algorithms for flow determination in business processes, identification of events and decisions, and determination of probabilities for their occurrence. Automatic detection of resources and their communication. Types of problems for business process mining. Knowledge discovery for business processes, introduction, techniques and applications. Business process discovery based on genetic algorithms. Business process discovery based on fuzzy logic. Conformance checking. Identification of bottlenecks. Enhancement of business process models. Re-design of business processes. Analysis and evaluation. Monitoring and control of business processes. Operational support. Software tools for knowledge	

	discovering about business processes.