



1.	Course title	Advanced artificial intelligence and machine learning
2.	Course code	IC-3-02
3.	Semester	9
4.	Unit offering the course	Faculty of Computer Science and Engineering
5.	ECTS	6
6.	Goals of the study programme	
	The student will be able to use advanced algorithms and techniques in the field of artificial intelligence and machine learning.	
7.	Contents of the study programme	
	This is an open choice where the candidate can choose to work on a project related to the latest achievements in the field of artificial intelligence (AI) and machine learning (ML). Possible topics include the following areas: natural language processing (understanding of texts, machine translation and machine translation, statistical processing of natural languages, etc.); metaphorical reasoning and reasoning by analogy; theoretical AI (new trends in AI theory, AI and legal reasoning, AI ethics); cyborg theory; theoretical ML (new trends in ML theory); Deep Learning (Neural networks and Convolutional Neural networks, TensorFlow); Advanced ML topics covering: graphic models, kernel methods, boosting, bagging, semi-supervised and active learning, and a tensor approach to data analysis.	