Course title	Artificial Intelligence Methods in Cybersecurity (Master)
Institute/Division	Faculty of Computer Science and Telecommunication/ Department of Computer Science
Course code	F-1.AICy
Erasmus subject code	11.4
Number of contact hours**	45 lecture hours (45h)
Course duration	1 semester (Fall)
ECTS credits	6
Course description (max 100 words)	The main aims of the course: • to provide students with basic knowledge of threats in IT systems and methods of their detection and elimination using AI-based tools; • to gain students' experience in simple project work on implementation of modern IDS systems based on artificial intelligence methods. In practice, the students should be able to define the project parameters and backgrounds (problem, method, parameters), collect and provide pre-processing of data, and select appropriate implementation tools.
Literature	All available materials on global optimization and heuristics.
Course type/organization	• Lectures (15h) • Projects (30h)
Assessment method	Attending lectures and completing the practical projects with the reports.
Prerequisites	Excellent programming skills (Python preferred)
Primary target group	They are mostly master's students, but they can also be third-year Bachelor's students with excellent programming skills (Python is preferred).
Contact person	Joanna Kołodziej (PhD, DsC, Prof.PK)
Remarks	N/A

*please insert one of the following codes:
11.0 Mathematics, Informatics
11.1 Mathematics
11.2 Statistics
11.3 Informatics, Computer Science
11.4 Artificial Intelligence
11.5 Actuarial Science
11.9 Others Mathematics, Informatics

**1 lecture hour=45 minutes