Course title	Game Programming with VR/AR (Master)
Institute/Division	Faculty of Computer Science and Telecommunication/ Department of Computer Science
Course code	F-1.IP
Erasmus subject code	11.3 Informatics, Computer Science
Number of contact hours**	45 lecture hours (45h)
Course duration	1 semester (Fall)
ECTS credits	6
Course description (max 100 words)	This course provides a comprehensive introduction to game development using Unity and C#, covering essential concepts, mechanics, and advanced techniques. Students will learn to design interactive environments and implement gameplay mechanics. The curriculum includes physics simulations, UI/UX design and performance optimization. Students will create fully functional games while mastering industry-standard tools and workflows. The course also explores VR/AR development, procedural generation, preparing students for careers in game design, development, and interactive media.
Literature	
Course type/organization	• Lectures (15h), • Computer labs (15h) • Project (15h)
Assessment method	attendance at lectures, practical exercises based on laboratory
Prerequisites	Basic understanding of object-oriented programming (OOP) in C# Familiarity with any 3D environment (e.g., Unity, Blender, Unreal Engine, or similar)
Primary target group	at least 3-rd year computer science students
Contact person	PhD Eng. Krzysztof Skabek
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