

Specification for the book of courses

| | | | | |
|--|---|---|---|----------------------|
| Study program | | Computing and Informatics | | |
| Module | | Information Systems and Technologies | | |
| Type and level of studies | | Master studies | | |
| The name of the course | | Advanced Techniques in 3D Modeling and Animation | | |
| Lecturer (for lectures) | | Vučković V. Vladan | | |
| Lecturer/associate (for exercises) | | Vučković V. Vladan | | |
| Lecturer/associate (for OFE) | | | | |
| Number of ECTS | | 4 | Course status (obligatory/elective) Elective | |
| Prerequisites | | | | |
| Course objectives | | Mastering the basic knowledge necessary to use advanced procedures and procedures in computer 3D modeling and animation. | | |
| Course outcomes | | Theoretical knowledge: mastering advanced techniques for computer 3D modeling and animation; 3D modeling, programming the path of cameras and generating animations on the computer. | | |
| Course outline | | | | |
| Theoretical teaching | | 3D Layout - Scenes in 3D software. Basics of rendering. Mental Ray - Antialiasing, GI, Final Gather. Mental ray Shaders: Mia X Pass, SSS, Illumination Shaders, Displacement, Ambient Occlusion. Mental Ray - Render Layers, Render Passes, Contribution maps. Hardware render. Lighting. Optimizing rendering. The basics of computer animation. Rendering animation. Modeling the camera path. Digital Directing Animation. Planning and organizing the project of digitally generated and animated film. Technical development of the project. | | |
| Practical teaching (exercises, OFE, study and research) | | Exercises; Preparation of seminar papers. Getting acquainted with advanced modeling and animation methods. Practical 3D modeling and animation on the computer. Use of modern 3D animation software. Generating various simple animations. | | |
| Textbooks/references | | | | |
| 1 | "Computer Animation, Second Edition: Algorithms and Techniques", Morgan Kaufmann; 2 edition (October 11, 2007); ISBN-10: 0125320000 ISBN-13: 978-0125320009 | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| Number of classes of active education per week during semester/trimester/year | | | | |
| Lectures | Exercises | OFE | Study and research work | Other classes |
| 2 | 1 | 0 | | |
| Teaching methods | | Lectures, consultations, independent work of students in the preparation of domestic tasks and projects. | | |
| Grade (maximum number of points 100) | | | | |
| Pre-exam duties | | Points | Final exam | Points |
| Activity during lectures | | | Written exam | |
| Exercises | | | Oral exam | 50 |
| Colloquia | | | | |
| Projects | | 50 | | |