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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | Computing and Informatics |
| Study Module (if applicable) | Information Technology |
| Course title | Advanced Techniques in 3D Modelling and Animation |
| Level of study |  Bachelor X Master’s ☐ Doctoral |
| Type of course | X Obligatory☐ Elective |
| Semester  | ☐ Autumn XSpring |
| Year of study  | 1 |
| Number of ECTS allocated | 4 |
| Name of lecturer/lecturers | Prof. dr Vučković V. Vladan |
| Teaching mode | X Lectures ☐Group tutorials ☐ Individual tutorials☐Laboratory work x Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Mastering the basic skills necessary to use advanced processes and procedures in a computer 3D. modeling and animation. Theoretical Knowledge: Mastering advanced techniques for computer 3D modeling and animation, 3D modeling, programming, and generate a camera path animation on the computer. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| 3D Layout - scene 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 rendering. Lighting. Optimize rendering. Basics of computer animation. Rendering animation. Modeling the camera path. Digital animation director. Planning and organization of the project and digitally generated animation. Technical elaboration of the project. |
| **LANGUAGE OF INSTRUCTION** |
| xSerbian (complete course) ☐ English (complete course) ☐ Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)xSerbian with English mentoring ☐Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** | **10** | **Written examination** |  |
| **Practical teaching** | **20** | **Oral examination** | **40** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |