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| Course name | **Computer Techniques of 3D Modelling** |
| Entity running the course | Faculty of Ceramics and Glass, Department of Interdisciplinary Activities in Ceramics and Glass |
| Entity for which the course has been prepared | Department of Ceramics, Department of Glass |
| Course type | Core course, compulsory course |
| Year of study/semester; Type of studies | Year 1/semester 1, 2/full time master's degree studies |
| ECTS credits | 2 |
| Academic tutor | Krzysztof Mielczarek |
| Aim of the course | The use of 3D applications for the purpose of developing the workshop of a designer. Modern methods of presentation with the use of 3D software. |
| Prerequisites | Intermediate level knowledge of the programme for 3D editing, concepts of 3D, geometry, technical drawing. |
| Learning outcomes: | |
| – *knowledge* | The student has an advanced knowledge of the use of 3D software, building a coherent and understandable design communicate. Based on the previous assignments and lectures about the use and methods of working with 3D programmes, the student consciously uses 3D editing software. Making use of the advantages of 3D programmes, the student is aware of their limitations. They have knowledge of the preparation for 3D printing/ prototyping. |
| – *skills* | The student has the skill to select and use advanced tools in 3D environment, they consciously choose the methodology of work and are able to make independent decisions on the projects including 3D objects. They are able to understand and apply designed models to the preparation of the project documentation, as well as prepare the models for 3D prototype printing. |
| – *personal and social competence* | The student understands the complexity of the process of preparing a 3D model for rendering, animation or 3D printing; they are aware of the necessity of teamwork during complex projects, which makes the whole process smooth and efficient. |
| Course content | Modeling of complex surfaces. The processes that organize a working space. Rendering issues at an intermediate level. Introduction to a script language (python). |
| Course form and number of course hours | Classes in the computer studio, individual projects, lectures, exercises, (15 hours/sem.) |
| Assessment methods and criteria | 55% executing assignments – realization of a project, innovation<br><br>15% working critique<br><br>5% active participation in a discussion<br><br>30% open critique of works |
| Assessment type | graded pass |
| Literature | -- |
| Teaching aids | Computer graphic workstations, tablet, 3D Reprap printer, 3D scanner, 3D mapping tools |
| Language of instruction | Polish with the possibility of communicating in English |