



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 3 /semester 5, 6/; full time bachelor's degree studies
ECTS credits	Semestr 5 - 3, semester 6 - 1
Academic tutor	Krzysztof Mielczarek
Aim of the course	Self-reliance in the use of software for editing in 3D environment.
Prerequisites	Knowledge of CAD / CAM, technical drawing, spatial imagination, a basic knowledge of the software for editing in the 3D environment.
Learning outcomes:	
– <i>knowledge</i>	The student has an extended knowledge of the use of 3D editing programs, building a coherent and understandable design communicate. Based on the previous assignments and lectures about the use and methods of working with the 3D editing programmes, the student consciously uses the programmes for 3D editing. Making use of their advantages, the student is aware of the programmes' limitations. They have knowledge in the area of preparation for 3D printing/prototyping.
– <i>skills</i>	The student has the skill to select and use the tools in the the 3D environment. They consciously use the methodology of work and can make independent decisions in the area of designing. They are able to understand and apply the designed models to the preparation of design documentation, as well as prepare the model for 3D prototype printing. The student is able to prepare the documentation for their diploma project.
– <i>personal and social competence</i>	The student understands the complexity of the process of preparing the 3D model for printing , and also the need for teamwork during complex projects.
Course content	Animation of the camera trajectory. Generating of 3D elements with parametric methods. Extending the scope of knowledge in the area of the preparation for 3D printing. Introduction to rendering materials and engines. The issue of light in the 3D environment. Complex deformations of objects. Issues regarding cooperation in a team. Layers and hierarchy in a 3D scene.
Course form and number of course hours	Classes in the computer studio, individual projects, lectures, exercises, 30 hours/sem.
Assessment methods and criteria	80% executing assignments –realization of a project, 15% working critique, 5% active participation in a discussion.
Assessment type	Semester 5 – graded pass. Semester 6 – graded pass.
Literature	Maya Python for Games and Film, Ryan Trowbridge & Adam Metchley– for the advanced.
Teaching aids	--
Language of instruction	Polish with the possibility of communicating in English.