

COURSE INFORMATION FORM

Faculty/ Institute	Faculty of Fine Arts and Architecture
Department	Department of Industrial Design
Course Code	EUT 216A
Course Title	Computer Aided Product Design 1
Language	English
Program	Industrial Design Undergraduate Program
Course Type	Must
Course Level	
Course ECTS	3
Prerequisites	None
Course Catalogue Description	The course covers the topics that provide a basis for computer aided design applications. The main subject of the course is to visualize and present design ideas with three dimensional CAD software. The course also includes the basic working principle of 3D modelling softwares and their contribution to design discipline and designers.
Course Objectives	The aim of this course to provide the basic information on CAD tools, visualization of design ideas in the three dimensional design environment and creating printed presentations of designs that are modelled and visualized in computer.
Course Learning Outcomes	At the end of the course, students are expected to understand the definitions of computer aided design, gain designing and visualization skills with using Rhinoceros 3D software and transfer two dimensional drawings of design ideas to three dimensional CAD models.
Resources and References	http://www.rhino3d.com/training.htm Rhino Training Manual 1 -2
Course Grading	Grade Points
Attendance	10*
Laboratory	
Applications	
Field Study	
Tasks	40**
Presentations	
Projects	
Seminars	
Midterms	20
Quiz	
Final	30
Total	100
	*According to the TOBB ETU education regulation, students who do not attend to more than 20% of the course fail and graded FF. Students have to bring the required tools and equipments with them to the course.**In class exercises and assignments are assessed as 70% of total grade of the assignment if it is submitted no later than one week, assignments that are submitted later than one week from deadline are not accepted and are graded as 0. Assignments are saved and e-mailed as name_surname_AssignmentName.
Weekly Outline	Topics
	Introduction to 3D design applications and computer hardware Definition of the course, expectations of students from the course and evaluation of their existing knowledge. Explanation of computer equipment (software and hardware) and quick tips on the solutions to some basic problems. 1 Introduction to the user interface of Rhinoceros, examining its differences and similarities as compared to other softwares.
	Introduction to Rhinoceros software and user interface Explanation of user interface elements of Rhinoceros software, cursor and viewing options and some shortcuts. Explanation of point, line, surface and solids. In class exercise -1 2
	Line and modelling methods with line – 1 Modelling with different line types and the examination of everyday life objects with regards to modeling. In class exercise -2 3
	Line and modelling methods with line – 1 – 2 Modelling 3D objects and examining 2D design drawings with regards to modelling. In class exercise -3 4
	Surface modelling and its use in modelling -1 Explanation of surface modelling methods and application with modelling sample objects. In class exercise -4 5
	Surface modelling and its use in modelling -2 Joining more than one surfaces by using surface modelling tools and explanation of transition between them. 6 Mid-term project -1 7 Modelling of an everyday object in class by using line and surface modelling tools.
	Advanced surface modelling techniques – 1 8 Surface creation using surface modelling commands, lines and curves. In class exercise -5
	Advanced surface modelling techniques – 2 9 Examination of the transition between different surfaces and surface continuity.
	Design visualization -1 10 Rendering of a 3D object that is modelled in Rhinoceros. Applying texture and material to models.
	Design visualization -2 11 Rendering of a 3D object that is modelled in Rhinoceros. Methods for setting up lights and shadows. In class exercise -6
	12 Final Project