Course Unit Descriptor

Study Programme: Information Technology

Course Unit Title: Graphical modeling

Course Unit Code: OAS010

Name of Lecturer(s): Ivan Palinkaš, PhD

Type and Level of Studies: Bachelor Academic Degree

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 5

Prerequisites: None

Course Aims:

The objective of the course is to master the basic principles of computer application in the process of two-dimensional drawing and three-dimensional geometric modeling.
A specific objective, that has methodological nature, includes the development of procedures for efficient computer graphic modeling and presentation of shaped models.

Learning Outcomes:

Student is qualified for independent and team work at a computer station formed for the application of graphics programs, and also he is able to adapt to work on new versions of software. With knowledge from the domain of visualization in the first place (rendering: scene, light, shadow, assignment of material properties, etc.), as well as the ability to pass on such knowledge.

Syllabus:

Theory

Basic stages of CAD modeling. Text styling. Preparation and creation of objects in the plane. Setting the drawing file parameters. Additional drawing and modeling methods. Basic drawing methods. Editing objects in the drawing. Hatch. Dimensioning and dimension editing. Geometric tolerances. Drafting. 3D object modeling. Surface 3D modeling. Solid 3D modeling. Model rendering. Engineering analysis of model. Project documentation management.
Practice

Preparation and model design in plain using CAD software. 3D modeling and visualization. Graphical model presentation.

Required Reading:

[1] Lee, K. PRINCIPLES OF CAD/CAM/CAE SYSTEMS, Addison – Wesley, USA, 1999.

[2] ed. D. Letić, 2D Design in AutoCAD – Tutorials, Technical Faculty ‘’M. Pupin’’, Zrenjanin, 2016.

[3] ed. D. Letić, 3D Design in AutoCAD – Tutorials, Technical Faculty ‘’M. Pupin’’, Zrenjanin, 2016.

Weekly Contact Hours: 4	**Lectures: 2**	**Practical work:2**

Teaching Methods:

Demonstration, monolog, dialog, laboratory and computer methods.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class	10	written exam	30

participation			
Preliminary exam(s)	40		
Seminar(s)	20		