

Introduction to Engineering

(AutoCAD course)

1 Introduction to AutoCAD.

2 Get familiar with the environment.

3 Creating drawings

4 - 5 Drawing tools (lines, circles, rectangles, polygons, arcs)

6 - 7 Modifying drawings

8 - 9 Manipulating drawings

10 Test 1 (10 points)

11 Introduction to drawings annotations (comparison of different engineering branches)

12 Dimensions and dimensions styles

13 Writing texts

14 Using leaders

15 Organizing drawings. Layers and xRefs

16 Blocks and dynamic blocks

17 Plotting drawings. Layouts, plot settings

18 Test 2 (10 points)

19 Introduction to 3D modelling

20 Navigating in 3D model

21 Creating solids

22 Modifying solids

23 Boolean operations

24 Creating 2D layout from 3D model

25 Surface modeling

26 Applying material properties

27 Rendering and visualization

28 Test 3 (10 points)

29 - 30 Presentation of students' projects (10 points)

Test:

Students will have to prepare a simple drawing based on a given example.

Project:

During the semester students will collect their drawings and present them on the last classes. As a main project Students will make drawings of their own apartments. The main project will be divided into 3 parts. In part 1 each student will measure and draw a plan of her/his apartments. In part 2 the dimensions and annotations will be added to the drawing. In part 3 the 3D model of the apartments will be build based on 2D plans prepared in parts 1 and 2.

Final grade:

0-30 points – three tests during semester each for 10 points

0-10 points – Presentation of student's project

The grade will be calculated as follows:

[21-24] - 3.0

[25-29] - 3.5

[30-33] - 4.0

[34-37] - 4.5

[38-40] - 5.0

Presence is obligatory. Positive grade is considered only if total presence is at least 80% of all lessons.

Lecturers:

Radosław Czubacki, PhD, Eng (r.czubacki@il.pw.edu.pl)

Sławomir Dudziak, PhD, Eng (s.dudziak@il.pw.edu.pl)

Jan Pelczyński, PhD, Eng (j.pelczynski@il.pw.edu.pl)

Faculty of Civil Engineering

Al. Armii Ludowej 16

00-367 Warszawa

www.il.pw.edu.pl