





## **COMPUTER GRAPHICS FOR ENGINEERS**

Course consists of 30 hours in computer laboratory and is oriented on letting the student achieve basic knowledge and competences in dealing with professional technical drafting and modeling package.

**Course Details** 

| No. | Subject   | Hours |
|-----|---|-------|
| 1.  | Exercise 1:   | 2     |
|     | Introduction to AutoCad.                                |       |
| 2.  | Exercise 2:   | 2     |
|     | Location and tracking                                   |       |
| 3.  | Exercise 3:   | 2     |
|     | Drawing basic 2d primitives. Dimensioning and hatching. |       |
| 4.  | Exercise 4:   | 2     |
|     | Object modification commands.                           |       |
| 5.  | Exercise 5:   | 2     |
|     | Object modification commands, continued.                |       |
| 6.  | Exercise 6:   | 2     |
|     | Layers and plotting. Model and paper spaces.            |       |
| 7.  | Exercise 7:   | 2     |
|     | Blocks.   |       |
| 8.  | Exercise 8:   | 2     |
|     | Geometrical and parametric constraints.                 |       |
| 9.  | Exercise 9:   | 2     |
|     | Attributed blocks. Data extraction.                     |       |
| 10. | Exercise 10:  | 2     |
|     | Basic 3d modeling operations.                           |       |
| 11. | Exercise 11:  | 2     |
|     | 3d modeling. Views and cross sections                   |       |
| 12. | Exercise 12:  | 2     |
|     | 3d modeling. Views and cross sections, continued.       |       |
| 13. | Exercise 13:  | 2     |
|     | Visualization model.                                    |       |
| 14. | Exercise 14:  | 2     |
|     | Rendering and animation                                 |       |
| 15. | Exercise 15:  | 2     |
|     | Rendering and animation, continued.                     |       |

## Passing the course

In order to pass the course student is required to prepare during class time:

- 1. a drawing of curved beam in accordance to the data issued during exercise 5,
- 2. a plan of an office (.dwg file and a printout) during exercise 7,
- 3. a drawing of a steel grider (.dwg file and a printout) during exercise 11,
- 4. a drawing of concrete foundation (.dwg file and a printout) during exercise 12,
- 5. a visualization and a short movie (.dwg and .avi files) of CUT campus during exercise 15

and submit these for evaluation at the end of the class meeting. Final grade is an average of grades obtained during the course. All the required class exercises have to be completed by the student and submitted for assessment during semester.