



COURSE DESCRIPTION AND DATASHEET

4th February 2013

CAD technology

2.	Subject code	Semester	Lec/Sem/Lab/reqs	Credit	Language
	BMEGEGE MW04	1	1+0+2/e	4	English

3. Responsible person for the subject:

Name:	Position:	Department:
Dr. Attila Piros	assistant professor	Department of Machine and Product Design

4. Lecturer

Name:	Position:	Department:
Dr. Attila Piros	assistant professor	Department of Machine and Product Design

5. The subject builds on knowledge of the following topics

General knowledge on computer aided engineering design on Bachelor level.

6. Course prerequisites and advisories

There are no course prerequisites.

7. Aims and objectives

The goal of the course is to prepare the students to resolve complex task in the mechanical engineering with the tools of the computer aided design.

8. Schedule of the subject

Okt. hét	Lectures (odd semester weeks)	Labs (R.115)
1.	Introduction, using of the intelliFiles.	Introduction, overview on the 3D part modelling.
2.	---	TOP-DOWN design in static constructions.
3.	Theory of the TOP-DOWN design.	Issuing homework No.1. Overview on 3D assembly modelling.
4.	---	Design of the cast parts.
5.	Product Data Management (PDM), Product Lifecycle Management (PLM)	3D model based technical drafting.
6.	---	SW test (45 min). Consultation.
7.	Parametric design.	Integration of the imported 3D data.
8.	---	Modelling of the parts with similar geometry. Issuing the homework No.2.
9.	Design of the mechanisms.	Design of the moving parts' kinematic.
10.	---	Modelling of the complex kinematic.
11.	Basics of the dimensioning and tolerancing.	Creating of kinematic analyses.
12.	---	TOP-DOWN design in moving constructions.
13.	Mid-term test.	Tolerancing in the CAD systems,
14.	---	Submission of the homework No.1 and No.2.

9. Requirements

Submitting two homeworks: Submitting project report. During the semester one project problem should be solved, the project documentation should be submitted in the 14th week. Maximum point is 50.

9.2 Writing two tests:

- Written mid-term test, based on the lectures and lecture notes. Maximum point is 25.
- Test on software usage. Maximum point is 25.

9.3. During the semester (conditions for signature):

Attendance in the lab is mandatory, number of absence from the lab has to be less than 3.

Submitting the homework:

The drawings have to be submitted in .pdf format together with the ultimate version of the concerning computer models and drawings in the original format of the used CAD system. All data have to be uploaded into the intelliFiles repository (gt3.intellifiles.eu) with the required parameters until the deadline.

The finished CAD models and drawings have to be compressed in a single ZIP file.

The name of the ZIP file: **name_NK_subject_HF#.zip**

Where: name - the name of the student with lower case letters with no spaces
 NK - the Neptun code (ID) of the student
 subject - the Neptun code of the subject (here is MW04)
 HF# - HF1 for the homework No.1, HF2 for the homework No.2

A screenshot image about the assembly model is also required in the upload procedure. There is no obligation for the format and the name of the image file.

The technical drawing also have to be uploaded in .pdf format.

The name of the file: **name_NK_subject_HF#_drwcode.pdf**

Where: name - the name of the student with lower case letters with no spaces
 NK - the Neptun code (ID) of the student
 subject - the Neptun code of the subject (here is MW04)
 HF# - HF1 for the homework No.1, HF2 for the homework No.2
 drwcode: 00 - assembly drawing
 01 - exploded drawing
 02 - component or family table drawing,

There is no screenshot required in case of .pdf format.

The data of the uploading: LESSON: *MW04*, PROJECT: *HF1 beadás*, or *HF2 beadás*

The home work files only in proper format and upload parameters will be accepted!

10. Supplementary opportunity

The mid-term test can be repeated in the 14th week.

The project documentation can be supplemented in the 15th week.

11. The determination method of the exam mark

The collected points are calculated by summing the mid-term and SW test and the results of the homeworks. The mid-term mark is evaluated by the following limits:

- 0 – 39 fail
- 40 – 54 pass
- 55 – 69 satisfactory
- 70 – 84 good
- 85 – 100 excellent

11. Consultation opportunity

Each and every lecturer/tutor involved in the course has open office hours, please check the websites of their departments. Occasionally appointments at other times are possible upon previous arrangement.

12. Recommended literature

1. Horváth I., et al: Advanced Design Support, Delft University of Technology, 2005.
2. Stoll, H.W.: Product Design Method and Practices, Marcel Dekker, Inc., 1999.
3. The short description of the labs can be accessed in the following link: cad-feladatok.c3d.hu

13. Working hours required for the subject

42 Contact hours. Homework with preparations for test: 48 hours.

14. Responsible person for the topics of the subject

Name:	Position:	Department:
Dr. Attila Piros	assistant professor	Department of Machine and Product Design