COURSE DESCRIPTION AND DATASHEET

3rd September 2019

CAD systems

2.	Subject code	Semester	Lec/Sem/Lab/reqs	Credit	Language
	BMEGEGE AGCS	7	1+0+2/e	3	English

3. Responsible person for the subject:

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

4. Lecturer

Name:	Position:	Department:
Dr. Attila Piros	associate 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 (even semester weeks R.113.)	Labs (D.303.)
1.	Theory of the TOP-DOWN design.	Introduction, overview on the 3D part modelling.
2.	---	3D part modelling. Issuing homework No.1.
3.	--- break: Sport Day ---	---
4.	---	Overview on 3D assembly modelling.
5.	Virtual prototyping.	Integration of the imported 3D data.
6.	Parametric design. (extra lecture on Saturday)	3D model based technical drafting.
7.	Design of the mechanisms.	3D model based assembly drafting.
8.		SW test (45 min). Consultation.
9.	--- break: All Hallows' Day ---	Modelling of parts with similar geometry. Issuing the homework No.2.
10.	---	Design of moving parts' kinematic.
11.	Mid-term test.	Modelling of complex kinematic.
12.	---	Creating kinematic analyses.
13.	Mid-term test retake.	TOP-DOWN design.
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_SC_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 AGCS)
SC - Semester Code (here is 18191)
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_SC_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 AGCS)
SC - Semester Code (here is 18191)
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	associate professor	Department of Machine and Product Design