ÓBUDA UNIVERSITY Bánki Donát, Faculty of Mechanical and Safety Engineering			Department of Machine and Safety Sciences	
Name and code of the course:	**Engineering Communication (BGBEC1KTNC)** **2016/2017 Spring**			Credits *: 2*
Courses:	**Mechanical and Mechatronic Engineering**			
Responsible Lecturer:	**György Gyurecz PhD**	Lecturers:	**György Gyurecz PhD**	
Pre-Courses:				
Hours/weeks	Lectures:**2**	Practicies:**0**	Laboratory: **0**	Consultation: **0**
Method of Controls (s,v,f):	**tests (2)**			

Teaching material

Aims: *The course introduces the students the concept of computer representation of a product, called Product Model (PM). Students learn the aim and the elements (aspect models) of the PM. The aim of the course to enable students to recognize engineering functions, assign geometry that carry out the function, add information to PM representing engineering intent and knowledge. A systematic method is given for the process of the building the geometrical, form feature assembly aspect model and, engineering documentation model of the product.*

SYLLABUS

Weeks	
1.	*Introduction , Presentation.: Concept of the Product Model and Engineering Documentation aspect model*
2.	*Engineering Documentation Model – Templates, creating and manipulating basic geometric elements*
3.	*Engineering Documentation Model – Creating geometry of a part according to its functions*
4.	*Engineering Documentation Model – Building the set of dimensions expressing the part's functions*
5.	*Exercises to create engineering documentation models of various real world examples*
6.	*TEST on Engineering Documentation Model*
7.	*Presentation: Geometrical Models in Computer Technics, Parametric Design and Form Feature Model*
8.	*Analysis of a real world product, determining its base part. Creating plan to represent the engineering intent using structure of the geometry, engineering constraints and dimensions of the basic part*
9.	*Continue the modeling with next parts, with special attention to represent engineering intent in terms of geometry, constraints and dimensions*
10.	*Continue the modeling with next parts, with special attention to represent engineering intent in terms of geometry, constraints and dimensions*
11.	*Assembling the product model, by applying 3D constraints. Start modeling a new product example*
12.	*Creating the Documentation model of the assembled model. Assembling and documenting the new product example*
13.	*Shape Modeling and Reconstruction, Basics of freeform surface design in practice, exercises for the test*
14.	*TEST from the material of presentations and 3D modeling*

Validity of the semester and method of creating the semester mark:

The semester can be valid with as minimum as 50% of each tests. The final mark for the semester is the average of the two tests:

50% - 60%	*failed*
60% - 70%	*satisfactory*
70% - 80%	*medium*
80% - 90%	*good*
90% - 100%	*excellent*

Literature:

- Lecture notes, ppt presentations
- Sexton: A concise Introduction to Engineering Graphics
- Autodesk Inventor 2016

Budapest, 2017.01.18.

György Gyurecz PhD
Responsible Lecturer