Class Syllabus – Spring Semester, 114 Academic Year

Department of Mechanical Engineering, National Chung Cheng University

<table>
<tr><td colspan="5">Course Name:： Engineering Graphics (II)</td><td>Dept.</td><td colspan="2">ME</td></tr>
<tr><td colspan="5"></td><td>Course Code</td><td colspan="2">4221151-02
4211151-02</td></tr>
<tr><td>Instructors</td><td>Yi-Hung Chen</td><td>Credits</td><td>1</td><td>Compulsory /Elective</td><td>Grade</td><td>First grade</td></tr>
<tr><td>EMI</td><td colspan="6">■ Yes ☐ No</td></tr>
<tr><td>Course type</td><td colspan="6">☐ Humanistic Care Course ☐ Competition Special Course
☐ Problem-oriented Course ■ Topic-based courses
☐ Integrate the curriculum ■ Practical courses
☐ Internship ☐ Other</td></tr>
<tr><td colspan="7">Prerequisites:

Class Description：
This course introduces basic computer-aided drawing concepts, from simple 2D drawing to the presentation of complex 3D models, and then presents design concepts through computer drawing.

Class Objective：

The goal of this course is to enable students to represent engineering parts using computer-aided drawing software.</td></tr>
<tr><td>Textbooks</td><td colspan="6"></td></tr>
<tr><td colspan="7">An overview of the main points of teaching</td></tr>
<tr><td>Teaching Materials</td><td colspan="6">■ PPT ■ Course handouts
☐ Self-edited textbooks ☐ Teaching Procedures
■ Self-made instructional videos ☐ Other</td></tr>
<tr><td>Teaching Methods</td><td colspan="6">■ Lectures ☐ Group discussion
☐ Oral presentation ☐ Problem-oriented learning
☐ Case studies ☐ Other</td></tr>
<tr><td>Evaluation Tools</td><td colspan="6">■ Mid-term Exam ■ Final Exam
☐ In-class Quiz ■ In-class homework
☐ Homework ☐ Mid-term Report
☐ Final Report ☐ Special Report
☐ Other ☐ Scales</td></tr>
<tr><td>Teaching Resources</td><td colspan="6">☐ Course website
■ Electronic files of textbooks are available for download
☐ Internship website</td></tr>
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Instructor's Information	

Course Outlines		Teaching Hours				Core Competence
Unit Title	Contents	Lectures	Demo	Practice	Other	
Introduction of Computer-Aided Design	Concept of CAD	1		2		B4,B7,B9
Solidworks	Introduction of the function and features of the Solidworks	15		30		B4,B7,B9

Achievable Core Competence		Achievable Objective
B4	Ability to write programming languages and computer-aided design	possesses computer-aided design skills in engineering graphics.
B7	Ability to implement and innovate	Capable of implementing SolidWorks
B9	Ability to work as a team, communicate effectively and manage the program	Possesses basic teamwork skills to complete reports.

Core competencies of the University Division

B1 Possess the ability of basic engineering mathematics, solid mechanics, heat flow mechanics, automatic control, materials science and opto-mechanical integration engineering practical analysis

B2 Ability to absorb and integrate cross-domain knowledge

B3 Ability to perform solid force experiments, heat flow experiments, mechanical project implementation, optoelectronic engineering experiments and analyze data

B4 Ability to write programming languages and computer-aided design

B5 Mechanical and opto-electromechanical systems, component design and process planning capabilities

B6 Ability to identify, analyse and solve professional problems

B7 Ability to implement and innovate

B8 Ability to engage in scientific writing and presentations

B9 Ability to work as a team, communicate effectively and manage the program

B10 Learn general knowledge and demonstrate the ability of engineering ethics, social responsibility and sustainable development

Weekly teaching plan				
Course Time	Course Location	Grading	Office hour	Teaching quality evaluation method
一 13:10~16:00	創新大樓 201	Homework 40% Mid-term Exam 30% Final Exam 30%		Questionnaire

Weeks	Teaching & Homework Progress	Note
1	Course Instruction and Basic Concept	
2	Sketch and Constrain	
3	Extrude	
4	Revolve Feature	
5	Reference Geometry	
6	Curve Line and Sweep Feature (1/2)	
7	Curve Line and Sweep Feature (2/2)	
8	Lofted Feature	
9	**Midterm Exam**	
10	Assambling Components	
11	Manufacturing Features	
12	Curve Surface Features	
13	Curve Surface Features	
14	Engineering Drawing	
15	Final Report	
16	**Final Exam**	