

Class Syllabus – Fall Semester, 115 Academic Year
International Bachelor Degree Program in Mechanical Engineering,
National Chung Cheng University

Course Name: : Engineering Graphics				Dept.		IBPME
				Course Code		4231005
Instructors	Rong-Shine Lin	Credits	1	Compulsory	Grade	First-Year
EMI	☒ Yes ☐ No					
Course type	☐ Humanistic Care Course ☐ Problem-oriented Course ☐ Integrate the curriculum ☐ Internship ☐ Competition Special Course ☐ Topic-based courses ☒ Practical courses ☐ Other					
Prerequisites: None						
Class Description : Engineering graphics is a language of engineering, serving as the bridge between design and manufacture. It is a fundamental subject in mechanical engineering education and a basic skill in engineering design. Students will learn how to read and create engineering drawings. The course content includes an introduction to graphics, applied geometric drawing, orthographic projection, dimensioning, tolerances, and fitting.						
Class Objective : The goal of this course is to teach students the theory, standards, procedures, and methods of engineering drawing. Students will learn to create visual representations of conceptual designs, interpret the engineering drawings, and enable to effectively communicate of design concepts. Students will also learn the computer graphic skills.						
Textbooks	None					
An overview of the main points of teaching						
Teaching Materials	☒ PPT ☐ Self-edited textbooks ☐ Self-made instructional videos ☐ Course handouts ☐ Teaching Procedures ☐ Other					
Teaching Methods	☒ Lectures ☐ Oral presentation ☐ Case studies ☐ Group discussion ☐ Problem-oriented learning ☐ Other					

Evaluation Tools	☒ Mid-term Exam	☒ Final Exam				
	☐ In-class Quiz	☐ In-class homework				
	☒ Homework	☐ Mid-term Report				
	☐ Final Report	☐ Special Report				
	☐ Other	☐ Scales				
Teaching Resources	☒ Course website ☐ Electronic files of textbooks are available for download ☐ Internship website					
Instructor's Information	Tel: ext. 33300, Rm. 426, e-mail: imelin@ccu.edu.tw					
Course Outlines		Teaching Hours				Core Competence
Unit Title	Contents	Lectures	Demo	Practice	Other	
Introduction to Graphics	1. Overview of graphics, 2. Drafting lines and lettering	1		2		B05
Applied Geometry	1. Division methods, 2. Tangency drawing 3. Polygon construction, 4. Curve drawing	2		4		B04
Projection Geometry	1. Point projection, 2. Line projection, 3. Plane projection, 4. Auxiliary projection	3		6		B05
Orthographic Projection	1. Orthographic drawing, 2. Dimensioning, 3. Auxiliary views, 4. Sectional views, 5. Isometric drawings, 6. Tolerances and fitting	10		20		B05
Achievable Core Competence		Achievable Objective				
B04	Ability to practice computer-aided design software	Ability to write programming languages and computer-aided design				
B05	Ability to practice mechanical component design	Mechanical and opto-electromechanical systems, component design and process planning capabilities				

Weekly teaching plan				
Course Time	Course Location	Grading	Office hour	Teaching quality evaluation method

Fri. 4~6 10:10- 13:00	Innovation Building Rm202	Homework 50% Midterm 20% Final 30%	Th. 10:30-11:30	Questionnaire
Weeks	Teaching & Homework Progress			Note
1	Introduction to graphics			
2	Lines and lettering			HW1
3	National holiday(9/25)			
4	Projection geometry, poin, line, and plane			HW2
5	National holiday(10/09)			
6	Orthographic projection, principles			HW3
7	Orthographic projection, three views			HW4
8	Orthographic projection, interpretation			HW5
9	Midterm			Midterm
10	Isometric drawings			HW6
11	Dimensioning I			HW7
12	Dimensioning II			HW8
13	Tolerances and fits			HW9
14	Auxiliary views and sectional views			HW10
15	Final			Final
16	National holiday (12/25)			
17	National holiday (01/01)			
18	Supplementary materials			