KOMAR UNIVERSITY OF SCIENCE AND TECHNOLOGY
(KUST)

ENGINEERING GRAPHICS SYLLABUS			
Course Title	Engineering Graphics		
Course Code	CVE2205	No. of Credits	2CH
Department	All Engineering Departments	College	College of Engineering
Pre-requisites Course Code	CVE1200	Co-requisites Course Code	N/A
Course Coordinator(s)	Mr. Sardasht Sardar Weli		
Email	Sardasht.sardar@komar.edu.iq	IP No.	116
Other Course Teacher(s)/Tutor(s)	N/A		
Class Hours	Section #1 Thursday (14:00-15:50)		
Contact Hours	Thursday (10:00-12:00)		
Course Type	Departmental Requirement		
Offer in Academic Year	Fall 2015		

COURSE DESCRIPTION

This course provides a fundamental background in engineering drawing to the students, which will enable them to work more effectively in the various fields of engineering. It will emphasize on the introduction to engineering drawing, fundamentals of engineering drawing, orthographic and pictorial drawing. This course also introduces the sectional and computer aided engineering drawing to the students. The students also will be given an exposure to use AutoCAD software for exercising their skills and knowledge to complete 2D and 3D drawings by using AutoCAD. Complete a given task in individual and in a group will help the students to understand well and master this course. This course style has been taken with amendment from University of North Caroline.

COURSE OBJECTIVES

Students will confidently use lines and letters in a technical drawing. They will be able to distinguish between the different types of orthographic projection, indicate the dimensions and tolerance of technical products, read print, and change drawings according to specific requirements. They will get a basic idea about how to produce a computer aided drawing (AutoCAD).

The learning objectives are divided into 4 learning units:

1. Basic Drawing and Design
2. Technical Drawing
3. Working Drawings and Design
4. AutoCAD Systems

COURSE LEARNING OUTCOMES

At the end of this course, the students are expected to be able :-

1. Explain engineering drawings objects (2D and 3D) and tools. [ABET Standard program A and K]
2. Understand the knowledge of sketching and technical drawing..[ABET Standard program A]
3. Use the knowledge of sketching and technical drawing in the various fields of engineering.[ABET Standard program K]
4. Draw the engineering drawing objects.[ABET Standard program A]

Reference: http://www.abet.org/eac-criteria-2014-2015/

GUIDELINES ON GRADING POLICY

A	**95-100%**	**C**	**70-74%**
A-	**94-90%**	**C-**	**65-69%**
B+	**87-89%**	**D+**	**60-64%**
B	**83-86%**	**D**	**55-59%**
B-	**80-82%**	**D-**	**50-54%**
C+	**75-79%**	**F**	**0-49%**
W	**Withdrawal**	**I**	**Incomplete**

***Note: Passing Grade is 65% and above**

COURSE CONTENTS

Course topics include:

- Introduction to Engineering Drawings
- Drawing Scales and lettering
- Drawing Construction
- Orthographic Projection
- Auxiliary View
- Sectioning
- Dimensioning
- Pictorial drawing
- Introduction to AutoCAD, 2D, 3D Drawing
- 2D Drawing Techniques, Lines, Arcs, Circles, Chamfers, etc…
- Layering
- CAD Dimensioning and Text Style
- 3D Modeling, View Points, and Orbiting
- Solid Modeling, and 3D View Drawing
- Dimensioning in 3D
- Rendering

Course Teaching and Learning Activities:

Lectures: during a week, the Typical Instrument lectures will be held once throughout the semester in Drawing Lab, and the CAD Drawing lectures will be held once throughout the semester in the Computer Lab.

Quiz & Homework's: Students should prepare hand/AutoCAD sheets and 3D models either in class or at home. All homework's should submit seven days after it has been assigned. Any postponement for any homework will not be accepted.

Midterm Exam (project): projects will be held in the Drawing Lab or Computer Lab throughout the midterm examination week to assess the techniques learned in the class.

Project : projects will be in a team work throughout the semester to assess the techniques learned in the class, both hand drawing and AutoCAD drawing are included. Each group should be maximum 4 students.

Presentation: The presentation will be about the project, each group has to present their own work in PowerPoint file.

Final Exam (Project): The final exam will be a comprehensive project including hand drawing techniques, AutoCAD

drawings and 3D models. It will held during the Final Examination week.

CLASS REQUIREMENT

SI NO	Item	Quantity
1	Drafting Board	1
2	T-Square, 30-60- and 45 Triangle, Square Set	1 for each
3	Engineering box	1 set
4	Drawing Clips or Drawing Tape	1
5	Pencil H,HB, and 4H	1 for each
6	Eraser	1
7	Blade/ Pencil Sharpener	1 for each
8	A2 Sheet Paper	1 per class
9	Scientific calculator	1

COURSE ASSESSMENT TOOL

Course assessment Tool	Description	Weight %
Quizes	8 Quizes	20%
Homeworks	6 HW	15%
Midterm Exam	The Midterm exam project will be hold at the Drawing Lab	15%
Project	The project will be a team work	15%
Presentation	The presentation will be on the project	5%
Final Exam	Final exam Project will be in Labs	30%
Total		100%

ESSENTIAL READINGS: (Journals, textbooks, website addresses etc.)

Textbooks:

Fundamentals of Graphics/ McGraw-Hill/5th edition/2006
ISBN:0390732303

References:

- Geometric and Engineering Drawing /3rd edition/ by Kenneth Morling/2010
  Publisher: Elsevier
  ISBN: 9780080967684
- Engineering Design Graphics/11th edition/James H. Earle/2003
  Publisher: Pearson prentice-Hall
  ISBN:0131425730

COURSE POLICY *(including plagiarism, academic honesty, attendance etc)*

KUST Academic Policy

http://sar.komar.edu.iq/files/Student%20hand%20Book%202013.pdf

Attendance:

- Students are expected to attend all lectures and must attend all activity works.
- There is no substitution for any homework or any assignments for students who miss classes without official

permission.

- Missed class should be arranged with the faculty.
- Students are subject to the policies mentioned in the KUST Student Handbook.
- KUST guidelines for lateness are as follows: Three occasions of lateness count as one absence. (You can be considered late the first minute of the lecture time).

GUIDELINES FOR SUCCESS

1. Share your knowledge with your classmates, work in groups.
2. Pay-attention in the classes is the guarantee of success.
3. Learn to think and understand the concepts rather than memorize them.
4. Be on time and don't miss the class, be prepared with the class requirement tools.
5. Be active participants; ask any question you think it helps you to understand.
6. You are so important to us, so be sure we are listening to you carefully since we are here to help you, therefore, no need to feel embarrassing to ask whatever you think its question in your mind.

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Course calendar: Please check the academic calendar for Fall 2015

Week	Beg/End Dates	Topics (Chapters)	Assessment tool
1	28Sep – 01Oct,2015	Syllabus Description and Introduction to Engineering Drawings	NA
2	04-08 Oct,2015	Drawing Scales Drawing lettering	NA
3	11-15 Oct,2015	Drawing Construction	Quiz #1 HW #1
4	18-22Oct,2015	Orthographic Projection	Quiz #2 HW #2
5	25-29Oct,2015	Auxiliary View	Quiz #3 HW #3
6	01-06Nov,2015	Sectioning Dimensioning	Quiz #4 HW #4
7	08-12Nov,2015	Pictorial sketching	Quiz #5
16-21Nov,2015 (Mid-term Exam)- Midterm Project			
8	22-26Nov,2015	Introduction to AutoCAD, 2D Drawing	Brain Storm Final Project Ideas, Select Partners
9	29Nov-03Dec,2015	2D Drawing Techniques, Lines, Arcs, Circles, Chamfers, etc...	Quiz #6
10	06-10Dec,2015	Layering, Dimensioning, Text Style	Quiz #7
11	13-17Dec,2015	3D Modeling, View Points, Orbiting	NA
12	20-24Dec,2015	Solid Modeling, 3 View Drawing	HW #5
New Year Holiday			
13	03-07Jan,2016	Dimensioning in 3D, Rendering	Quiz #8 HW #6
14	10-14Jan,2016	Working Hand Drawing and AutoCAD Drawing-Project Presentation	
15	17-21Jan,2016	Review Week	
24-31Jan 2016 (Final Examination)- Final Project			