GAU, Faculty of Engineering

Course Unit Title	Computer Aided Drawing
Course Unit Code	ENG103
Type of Course Unit	Compulsory, engineering students
Level of Course Unit	BSc
National Credits	3
Number of ECTS Credits Allocated	5 ECTS
Theoretical (hour/week)	2
Practice (hour/week)	-
Laboratory (hour/week)	2
Year of Study	1
Semester when the course unit is delivered	1
Mode of Delivery	Face to Face, Laboratory Experiments, Web
Language of Instruction	English
Prerequisities and co-requisities	-
Recommended Optional Programme Components	-

Objectives of the Course

- Draw geometric shapes in space
- To introduce students various forms of graphical representations
- Usage of a drawing applications (AutoCAD) to draw any desired 2D graphic
- Gain ability to draw any dimensioned figure

Learning Outcomes		
When this course has been completed the student should be able to		Assesment
1	Have a clear understanding about drawing techniques in 2D	1
2	Know and use basic drawing commands	1,5
3	Know and use basic modifier commands	1,5
4	Draw any given dimensioned figure	1,5

Assesment Methods: 1. Exam, 2. Assignment 3. Project/Report, 4. Presentation, 5 Lab.Work

Course's Contribution to Program

		CL
1	Ability to understand and apply knowledge of mathematics, science, and engineering	2
2	Ability to design and conduct experiments as well as to analyze and interpret data	
3	Ability to work in multidisciplinary teams while exhibiting professional responsibility and ethical conduct	1
4	Ability to apply systems thinking in problem solving and system design	4
5	Knowledge of contemporary issues while continuing to engage in lifelong learning	
6	Ability to use the techniques, skills and modern engineering tools necessary for engineering practice	3
7	Ability to express their ideas and findings, in written and oral form	1
8	Ability to design and integrate systems, components or processes to meet desired needs within realistic constraints	3
9	Ability to approach engineering problems and effects of their possible solutions within a well structured, ethically responsible and professional manner	

CL (Contribution Level): 1.Very Low, 2.Low, 3.Moderate, 4.High, 5.Very High

Course Contents

Week			Exams
1		Introduction about drawing application environment	
2		Line tool command, Drafting settings	
3		Circle tool command, Coordinate system	
4		Polygon, Donut, Boundary and Hatch tool commands	
5		Rectangle, point, divide, measure and object snap	
6		Arc and Helix	
7		Polyline and Text entry	
8			Midterm
9		Move, copy, fillet, chamfer, explode and align	
10		Rotate and Mirror modifier	
11		Block, Insert, Purge commands	
12		Stretch, scale, trim and extent modifiers	
13		Offset and Array modifier	
14		Layers in drawing	
15			Final

Recommended Sources

Textbook: Introduction to AutoCAD 2010 - 2D & 3D Design, A.Yarwood, Elsevier, 2009

Supplementary Material(s): AutoCAD 2010 and AutoCAD LT 2010: No Experience Required, J.McFarland, Sybex, 2009

Assessment

Attendance	10%	
Homeworks	5%	
Laboratory	10%	Lab Grade= (Lab Performance × Lab Attendance)
Midterm Exam (Computer Based)	35%	
Final Exam (Computer Based)	40%	
Total	100%	

ECTS Allocated Based on the Student Workload

Activities	Number	Duration (hour)	Total Workload(hour)
Course duration in class (including the Exam week)	13	2	26
Labs and Tutorials	13	2	26
Assignments	5	5	25
E-Learning Activities	-	-	-
Project/Presentation/Report Writing	-	-	-
Quizzes	-	-	-
Lab Exams	-	-	-
Midterm Examination	1	18	18
Final Examination	1	18	18
Self Study	13	4	52
Total Workload			165
Total Workload/30 (h)			5.5
ECTS Credit of the Course			6