

GAU, Faculty of Engineering

Course Unit Title	Technical Drawing	
Course Unit Code	CVEN205	
Type of Course Unit	Compulsory, All civil engineering students	
Level of Course Unit	Undergraduate	
National Credits	2	
Number of ECTS Credits Allocated	2 ECTS	
Theoretical (hour/week)	1	
Practice (hour/week)	2	
Laboratory (hour/week)	-	
Year of Study	2	
Semester when the course unit is delivered	3	
Mode of Delivery	Face to Face	
Language of Instruction	English	
Prerequisites and co-requisites	ENG103	
Recommended Optional Programme Components	None	
Objectives of the Course:		
<ul style="list-style-type: none"> ➤ Introduce students with basic architectural and engineering drawing techniques and applications. ➤ Beginning with basic drawing exercises and continuing with more complicated studies, ➤ students will develop their ability of using drawing tools, ➤ understanding different properties of three dimensional objects and drawing both existing objects and their own designs step by step. ➤ Throughout the course they will become familiar with fundamentals of graphic representation such as floor plans, sections, elevations and site plans; concept of scale; line types, line weights and drawing quality; vertical circulation elements and detailing and dimensioning. 		
Learning Outcomes		
When this course has been completed the student should be able to		Assesment.
1	Use drawing tools	1,2,3
2	Understand engineering drawings	1,2,3
3	Draw ortographic drawings of existing structures (plans, sections, elevations, site plans, silhouettes)	1,2,3,4
4	Draw three dimensional views of any given structure	1,2,3
5	Dimensions on engineering drawings	1,2,3
6	Draw details on engineering drawings	1,2,3
Assesment Methods: 1. Written 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	1
2	Ability to design and conduct experiments as well as to analyze and interpret data	1
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	3
5	Knowledge of contemporary issues while continuing to engage in lifelong learning	1
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	2
9	Ability to approach engineering problems and effects of their possible solutions within a well structured, ethically responsible and professional manner	2
10	Ability to manage time and resources effectively and efficiently while carrying out civil engineering projects	2
11	Ability to combine knowledge from different areas of civil engineering for problem solving and system design with an ethical and sustainable approach	2
CL: Contribution Level (1: Very Low, 2: Low, 3: Moderate 4: High, 5:Very High)		

Course Contents			
Week			Exams
1		Typography, Lettering and Linetypes	
2		Typography, Lettering and Linetypes	
3		Orthographic and Paraline Drawing	
4		Orthographic and Paraline Drawing	
5		Orthographic and Paraline Drawing	
6		Constructing a floor plan step by step: What is a plan? Its elements. Recognizing the structural elements. Walls and openings in a plan. Details of a floor plan. Walls, doors, windows, floor coverings, furnishings, dimensioning and texts, representation of different materials in a plan.	
7		Constructing a floor plan step by step: What is a plan? Its elements. Recognizing the structural elements. Walls and openings in a plan. Details of a floor plan. Walls, doors, windows, floor coverings, furnishings, dimensioning and texts, representation of different materials in a plan.	
8		Constructing a section step by step: What is a section? Its elements. Recognizing structural elements, walls, foundations, roof system. Details in a section. Walls, openings, connection of different layers, representation of different materials, dimensioning and texts in section.	
9			Mid Term
10		Constructing a section step by step: What is a section? Its elements. Recognizing structural elements, walls, foundations, roof system. Details in a section. Walls, openings, connection of different layers, representation of different materials, dimensioning and texts in section.	
11		Constructing an elevation drawing from given plans and sections. Detailing in elevation, drawing of different materials, dimensioning, shading.	
12		How to draw stairs, stair types. Connecting two floors, measurement of steps and rises, dimensioning.	
13		Site Plan	
14		Exercise	
15			Final

Recommended Sources

- 1.Ching, Francis D.K. (1996) **Architectural Graphics**, 3rd ed. , Van Nostrand Reinhold.
- 2.Neufert E., Neufert P.(2002) **Neufert Architects' Data**, 3rd ed. Wiley-Blackwell.
- 3.Grau III P.A. , Muller E.J. ,Fausett J.G. (2010), **Architectural Drawing and Light Construction**, 8th ed., Pearson.
- 4.Yee, Rendow (2007) **Architectural Drawing a Visual Compendium of Types and Methods**, 3rd ed., JohnWiley and Sons, Inc.
- 5.Lin, Mike W. (1993) **Drawing and Designing with Confidence: A Step by Step Guide**, JohnWiley and Sons, Inc.
- 6.Laseau, Paul. (2001) **Graphic Thinking for Architects and Designers**, John Wiley & Sons

Supplementary Material (s):

Assessment

Attendance	%0	
Class work	%20	
Midterm Exam (Written)	%30	
Quiz (Written)	%10	
Final Exam (Written)	%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)	15	1	15
Labs and Tutorials	15	2	30

Assignments	-	-	-
Project/Presentation/Report Writing	-	-	-
E-learning Activities	-	-	-
Quizzes	2	3	6
Midterm Examination	1	6	6
Final Examination	1	8	8
Self Study	14	0.5	7
Total Workload			72
Total Workload/30 (h)			2.4
ECTS Credit of the Course			2