

Course Code	Course Name	Year/Semester	Theory	Practice	Credits	ECTS
IAED 2102	Computer Aided Technical Drawing	2023-2024/ SPRING	2	2	3	5

Level of Course: Undergraduate

Course Type: Must Course

Language of Instruction: English

Course Time: Tuesday 9.00-13.00

Office Hours: -

Course classroom: Microsoft Teams

Mode of Delivery: Class Teaching, Presentation, Assignments

Prerequisites and Co-requisites: IAED 1102

Co-requisites: None

Course Coordinator: Asst. Prof. M. Başak Karaduman

Name of Lecturer(s):
Course Teaching

Assistant:

Res. Asst. Müge Develier

Course Objectives: This course is organized for developing the ability of the student to explore the world of digital modeling and to increase the capabilities of visualizing an architectural object on the base of the Theory of drawing.

Course Description: This course aims to teach basic digital presentation techniques with using AutoCAD computer program as a design tool. The aim is to familiarize students with visualization techniques in architectural design and to develop strategies for learning AutoCAD computer program. Furthermore, with the help of the program, it is taught to draw, to combine existing drawings and to print.

Learning Outcomes: Upon successful completion of the course, students will be able to:

- Recalling the fundamentals of the two-dimensional drawing.
- Interpreting the potentiality of the digital representation
- Analyzing objects by attributing them the appropriate representation by using three-dimensional space
- Solving basics and complex graphical problems with Autocad software.
- Comparing different representation methods by the digital modeling.

Language: The studio classes and discussions will be in English. Developing your verbal language skills will be very important in acquiring the disciplinary terminology as well as daily communication at the class.

Text Books: -

- Recommended Text Books:**
1. Hızlı ve kolay AutoCAD 2008 ve AutoCAD LT 2008 / David. Frey, Jon McFarlar; çev. ve ed. Selçuk Tüzel
 2. Introduction to AutoCAD 2008 / Alf Yarwood (e-book)
 3. Beginning AutoCAD 2007 / Bob McFarlane (e-book)

For the Terminology:

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Planned Learning Activities and

Teaching Method: **Learning/Teaching Method:** The expected learning outcomes for the course will be assessed through: Class hour submissions, a Midterm Project, Final Project and Class discussions and feedback.

Assignments: Students are required to complete and submit assignments for both in class exercise and home works according to syllabus.

Class Participation: Regular attendance of all enrolled classes is expected. Do not be late to the class. Attendance will be taken through your signature within the first quarter of the class; if you come later you will be considered absent. At the end of the Semester, your attendance will be reported on UBS system. Attendance is compulsory and in case of absenteeism of more than **20% for the practice and %30 for the theory, the system will automatically grade you "FX"**. If you miss a class, it is your responsibility to 'make up' all work, including items discussed in class. Class contribution will be measured in terms of quality not quantity. If you need to leave early for whatever reason, you should exercise politeness and notify your professor at the commencement of the session.

Academic integrity & plagiarism: Academic integrity is the pursuit of scholarly activity based on the values of: honesty, trust, fairness, respect and responsibility. Practicing academic integrity means never plagiarizing or cheating, never misrepresenting yourself, never falsifying information, never deceiving or compromising the work of others. Basically this means, either intentionally or unintentionally, using the words or ideas of someone else without giving credit, it's strictly forbidden.

Course Text books: There is no specific textbook for this course.

Key Works: In this studio course lectures and assignments mainly focuses on Computer aided design by using AutoCAD software.

Specific Rules:

1. **Be punctual. Punctuality is a sign of respect toward yourself and the others.**
2. Show respect for all the people and property around you.
3. Be responsible for your actions and meet all expectations.
4. Follow directions the first time they are given.
5. Students should raise their hand to signal a question or to answer a question.
6. Students should use the Internet at school for academic purposes only.

7. It is forbidden to record classes with any type of device.

Communication: Students are encouraged to visit the professor during their Office Hours. If you cannot make it to announced office hours, please make individual arrangements via e-mail. However, do not expect the professor and the research assistant to respond at length via e-mail to questions of content, definition of terms, grading questions etc. If you have a question that requires a substantive response please set up an appointment to speak with one of us.

**Course Contents*:
(Weekly Lecture
Plan)**

Date	Week	Chapter Topic	Take-home exercise
13.02.24	1	- Introduction to AutoCAD and the layout: Creating and saving a drawing page. Transitions between files and copies. Opening command bars. Program parameters and shortcuts.	Practice of in class works
20.02.24	2	-Layer editing: Layer creation and customization. Changing the layer properties (colour, thickness, line type settings). Layer on- off, freezing, locking	Practice of in class works and online tutorials
27.02.24	3	Main Commands: Basic drawing creation commands (line, ray, construction line, multiline, polyline, rectangle, spline, ellipse, circle, arc drawing). Line spacer bar settings, command selection and options. -Page operation options: Setting and using Osnap, Grid, Ortho, Polar, LWT, Model options.	Ass. 1: Main Commands and Layers Practice of in class works and online tutorials
5.03.24	4	-Modifications: Moving, copying, reproducing and modifying the furniture and interior drawings that are created. Move, copy, rotate, scale, stretch, mirror, offset, array, trim, extend, fillet, chamfer commands with examples of interior drawing.	Practice of in class works and online tutorials
12.03.24	5	-Block: Creating blocks from interior drawings. Working in created	Ass. 2: Modifications and Blocks Practice of in class works and online

		blocks. Exploding blocks. Examples of use of blocks in interior projects -Explode, join, break, flatten, blend curves, group, overkill commands. - Align, purge, regen, recover all, previous selection, oops commands	tutorials
19.03.24	6	-Hatching: Pattern creation in interior drawings. Creating material, solid and gradient hatches. Send back bring to front commands.	Practice of in class works and online tutorials
26.03.24	7	-Dimensioning: Planning and dimensioning of drawings. Display of dimension settings. Multipoint, divide, boundary and revision cloud commands. Using the Text command. Properties and area. - Practise before midterm. Summary of all the works. (fillet, chamfer, arc, trim, extend, stretch, scale, ellipse)	Practice of in class works and online tutorials
	8	- MIDTERM EXAM WEEK	
9.04.24	9	National Holiday	
16.04.24	10	Plot: Preparing drawings to print. Scale, pen, colour, paper size, adjustments. Units and limits commands.	Practice of in class works and online tutorials
23.04.24	11	National Holiday	
30.04.24	12	Introduction to Photoshop Importing AutoCAD drawings to Photoshop Working with layers Adjusting line colours and qualities	Ass. 3: Plot and Photoshop Practice of in class works and online tutorials Practice of in class works and online tutorials
7.05.24	13	Additional adjustments in Photoshop Regional working	Ass. 4: Adjustments with using Photoshop Practice of in class works and online tutorials
14.05.24	14	Layout preparation: Editing drawing layouts. Scaling in Layout. General practice before Final project	Practice of in class works and online tutorials

FINAL EXAM

* **PLEASE NOTE:** Details of the syllabus and course schedule are subject to minor changes that will be announced in class and posted on LMS.

Grading: Midterm and final exam responses will be evaluated for accuracy, thoughtfulness and clarity. Assignments will be evaluated for content, quality of ide as and clarity of presentation (including both writing and graphics).

If total assessment grade is lower than 50, student need to repeat the course.

Assessment Methods and Criteria :	METHODS	EFFECTS ON GRADING
	Assignments and Participation	20%
Midterm Project	30%	
Final Project	50%	
	100%	

ECTS Workload Table :	ACTIVITIES	NUMBER	HOUR	WORKLOAD
	Course Teaching Hours	13	4	52
	Practical	13	4	52
	Homework	4	4	16
	Self-study for Midterm Project	1	10	10
	Self-study for Final Exam	1	15	15
	Total Workload	0	0	145
	Total workload/25			145/25
	ECTS			5

GRADING AND EVALUATION

The students' progress will be evaluated throughout the semester. Students' grades point lower than 50 will be considered as failed.

Grade Scale:

GRADE	MARKS	VALUE	GRADE	MARKS	VALUE
A+			C+	60-64	2.40
A	95-100	4.00	C	55-59	2.20
A-	85-94	3.70	C-	50-54	1.70
B+	80-84	3.30	D+	45-49	1.30
B	75-79	3.00	D	40-44	1.00
B-	65-74	2.70	F	0-39	0.00