ANTALYA BİLİM ÜNİVERSİTESİ

DEPARTMENT OF INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN

Course Code	Course Name	Year/Semester	Theory	Practice	Credits	ECTS
IAED 2159	ARTIFICIAL INTELLIGENCE IN DESIGN	2024-2025 / FALL	1	2	3	3

Level of Course: Undergraduate
Course Type: Elective Course
Language of Instruction: English
Course time: Monday, 09.30– 12.30
Course classroom: BB-04
Mode of Delivery: One o one critique, Class Teaching, Presentation, Classwork
Prerequisites and Co-requisites: -
Course Coordinator:

Name of Lecturer(s): Asst. Prof. Dr. Setenay UÇAR
Course Teaching Assistant:

Course Objectives: The aim of the course is to provide students with information about the areas of use with examples on artificial intelligence, to provide information on basic methods and to enable students to have the ability to use artificial intelligence methods in solving practical problems.

Course Description: The course will enable students to have preliminary knowledge of what they can create in architecture using artificial intelligence and to apply it in their own projects with an exercise.

Learning Outcomes:

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

1. Students will be able to recognize artificial intelligence concepts and attitudes.
2. Students will gain skills for problem solving in architecture by examining advanced methods.
3. Students will be able to propose solutions with the methods they learned in the field of design.
4. By creating an artificial intelligence model, they can emphasize and develop the subject they apply in their projects.
5. Students will be able to identify research opportunities in this field.

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. Artificial intelligence : structures and strategies for complex problem solving / George Luger, 2005
2. Artificial intelligence : a modern approach / Stuart Jonathan Russell, Peter Norvig, 2010
3. Yapay zeka uygulamaları . Ankara: Seçkin Yayıncılık. Çetin Elmas, 2018
4. Yapay Zeka, KODLAB, Atınç Yılmaz, 2021

For the terminology:

5. Weber-Lewerenz, B. C. (2022). Accents of added value in construction 4.0: Ethical observations in dealing with digitization and AI. Springer Nature.
6. Leach, N. (2021). Architecture in the age of artificial intelligence.
7. Chaillou, S. (2022). Artificial intelligence and architecture: from research to practice. Birkhäuser.

Reading Text books:

Planned Learning Activities and Teaching Method:

Learning/Teaching Method: This is an elective course and students learn about ecological information by engaging in classwork and presentations. The studio practice is supported by verbal lectures at the beginning of the course and later individual hand-on exercises in the classroom.

Classworks: A series of assignments will be given to students. Students will start doing the assignments in the classroom and continue the assignment at home.

Classwork Development: At the end of each classwork the outcome will be evaluated in the class.

Class Participation: Regular attendance of all enrolled classes is expected. For this course **minimum 70% attendance is expected.** 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 30%, 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.

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. Students are required to study the recommended reading text books and also do researches on the variety of architectural presentation techniques.

Key Works: In this studio course assignments mainly focuses on clear and creative ecological and sustainability of design ideas.

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 use the Internet at school for academic purposes only.
6. It is forbidden to record classes with any type of device.
7. Bringing necessary materials to work in the classroom is obligatory.

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	
23.09.2024	**1**	**Introduction to the course**	-	
30.09.2024	**2**	**Artificial intelligence using areas, examples, ethics**	Presentation Preparation	
07.10.2024	**3**	**Sample of artificial neural network, deep learning, fuzzy logic, Rules**	Presentation Preparation	
14.10.2024	**4**	**Prompt in Interior Design outputs AI programs on web**	Presentation Preparation	
21.10.2024	**5**	**AI programs on web Classwork**	Presentation Preparation	
28.10.2024	**6**	**AI programs on web Classwork**	Presentation Preparation	
04.11.2024	**7**	**AI programs on web Classwork**	Midterm Preparation	
	8	**Midterm**		
18.11.2024	**9**	**Project with SD program basics for interior architecture**	Presentation Preparation	

25.11.2024	**10**	**Project with SD program basics for interior architecture**	Presentation Preparation	
02.12.2024	**11**	**Visual production processes Classwork**	Presentation Preparation	
09.12.2024	**12**	**Announcement the final submission Critiques**	Presentation Preparation	
16.12.2024	**13**	**Visual production processes Critiques**	Final Poster Preparation	
23.12.2024	**14**	**Visual production processes Critiques**	Final Poster Preparation	
30.12.2024	**15**	**Finalize the final submission Critiques**	Final Poster Preparation	
	FINAL EXAM			

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

Grading: Midterm and final exam projects will be evaluated based on the requirements that will be announced in the classroom. Assignments will be evaluated based on the quality of presentation. Students' progress also will be evaluated throughout the semester based on their performance in classroom. Students with the Final Grade below C- (50) are required to repeat the course.

Assessment Methods and Criteria :	**METHODS**	**EFFECTS ON GRADING**		
	Midterm	20 %		
	Classwork	30 %		
	Final	50 %		
ECTS Workload Table :	**ACTIVITIES**	**NUMBER**	**HOUR**	**WORKLOAD**
	Course Teaching Hours	**13**	**3**	**39**
	Presentation	**2**	**3**	**6**
	Classwork	**6**	**2**	**12**
	Midterm Preparation	**1**	**8**	**8**
	Final Preparation	**1**	**10**	**10**
	Total Workload	**0**	**0**	**75**
	Total workload/25			**75/25**
	ECTS			**3**

GRADING AND EVALUATION

Students' grades point lower **than 50** will be considered as failed

Grade Scale:

GRADE	MARKS	VALUE
A+		
A	95-100	4.00
A-	85-94	3.70
B+	80-84	3.30
B	75-79	3.00
B-	65-74	2.70

GRADE	MARKS	VALUE
C+	60-64	2.40
C	55-59	2.20
C-	50-54	2.00
D+	45-49	1.70
D	40-44	1.50
F	0-39	0.00