

Course Code	Course Name	Year/Semester	Theory	Practice	Credits	ECTS
IAED 3302	Environmental Control in Interior Space	2025/2026 Spring	3	0	3	3

Level of Course: Undergraduate

Course Type: Core Course

Language of

Instruction: English

Course time: 9.00-12.00 / Tuesday

Course classroom: BG-36 (STD G1)

Mode of Delivery: Class Teaching, Presentation, Assignments

Prerequisites and None

Co-requisite: None

Course Coordinator: Lec. Kadir Emre BAKIR

Name of Lecturer(s): Lec. Kadir Emre BAKIR

Course Teaching

Assistant: Res. Asst. Hakan BAL

Course Objectives: It is aimed to investigate environmental conditions and evaluate its impact on interior space.

Course Description: This course aims to discuss the interior thermal comfort in the scope of passive conditioning (heating, cooling, ventilation and humidification) criteria and how these criteria are applied as a part of the design.

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

- Select products and materials that comply with human and environmental health standards.
- Understand acoustics, thermal comfort and indoor air quality issues and the effects of developed strategies on human comfort.
- Gain knowledge of plumbing and waste management.
- Understand indoor air quality principles and the effects of practices on indoor air quality.

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: There is no specific textbook for this course.

Recommended Text Books: Mehta M., Architectural Acoustics: Principles and Design 1st Edition
O.H. Koenigsberger, Manual of Tropical Housing and Building: Climate Design
H.B Awbi, Ventilation of Buildings
C. Carter, J. De Villiers, Johan De Villiers, Principles of Passive Solar Building Design
Burberry P., Environment and Services
Lechner N., Heating, Cooling, Lighting: Sustainable Design Methods for Architects 3rd Edition
A.F.E Wise, J.A. Swaffield, Water, Sanitary and Waste Services for Buildings

For the terminology:

Reading Text books:

Planned Learning Activities and Teaching Method: **Learning/Teaching Method:** The expected learning outcomes for the course will be assessed through: individual presentations, Midterm submissionw, Final submissions, class discussions and feedback.

Homework: Students are required to submit throughout the semester.

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 half-attended.** 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.

Use of Artificial Intelligence (AI):

Students are permitted to use artificial intelligence (AI) tools (such as ChatGPT, Grammarly, etc.) for grammar correction and academic writing improvement throughout their work. However, AI-generated original content (e.g., analysis, paragraph writing, conceptual description, etc.) must not exceed 20% of the submitted material.

In any case where AI tools are used, students are required to include a clear declaration within the assignment/report/submission. This declaration must include the name of the AI tool/model used, the specific purpose, and a brief explanation of how it contributed to the work.

Example declaration:

"I used ChatGPT-4 for proofreading and restructuring the introductory paragraph."

Failure to declare the use of AI tools when applied will be treated as a violation of academic integrity and plagiarism policies and may result in disciplinary action.

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

Key Works: In this course lectures and assignments mainly focuses on all pipe systems, HVAC, Water systems, electricity, lighting design, acoustic and sound insulation.

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
10.02.2026	1	Introduction to the Course	N/A
17.02.2026	2	Energy efficient design -Sustainability -Sustainable Approaches	Exercises related to the subject will be announced in the class.
24.02.2026	3	Acoustics & Sound Insulation	Exercises related to the subject will be announced in the class.
03.03.2026	4	Heat and Temperature	Exercises related to the subject will be announced in the class.
10.03.2026	5	HVAC Systems & Passive Cooling	Exercises related to the subject will be announced in the class.
17.03.2026	6	Lighting & Electrical Equipment	Exercises related to the subject will be announced in the class.
24.03.2026	7	Heat and Water Insulation	Please provide and edit your technical drawings.
	8	MIDTERM SUBMISSION	
07.04.2026	9	Fire Projects Announcement of Final Project	Exercises related to the subject will be announced in the class.

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14.04.2026	10	Water-Electrical-Fire and Mechanical Projects	Drawing
21.04.2026	11	Water-Electrical-Fire and Mechanical Projects	Drawing
28.04.2026	12	Water-Electricity-Fire and Mechanical Projects	Drawing
05.05.2026	13	Water-Electricity-Fire and Mechanical Projects	Drawing
12.05.2026	14	General Review and Q&A	Final Preparations
19.05.2026	15	NATIONAL HOLIDAY	
			FINAL SUBMISSION

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

Grading: Research projects and final exam responses will be evaluated for accuracy, thoughtfulness and clarity. Assignments will be evaluated for content, quality of ideas and clarity of presentation (including both writing and graphics). If total assessment grade is lower than 50, student needs to repeat the course.

Assessment Methods and Criteria :

METHODS	EFFECTS ON GRADING
In-class Drawings and Homework	%25
Midterm Submission	%35
Final Submission	%40
	100

ECTS Workload Table :

ACTIVITIES	NUMBER	HOUR	WORKLOAD
Course Teaching Hours	14	3	42
In-class Drawings and Homework	11	2	22
Self-study for Midterm Submission	1	4	4
Self-study for Final Submission	1	7	7
Total Workload	0	0	75
Total workload/25			75/25
ECTS			3

GRADING AND EVALUATION

The students' progress will be evaluated throughout the semester. Students' grade 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	1.70
D+	45-49	1.30
D	40-44	1.00
F	0-39	0.00

Course outline and evaluation criteria can be changed according to weekly progress by course instructor. If any change will occur, it will announce to students via e-mail.