School of Fine Arts Design and Architecture / Architecture (English)

2023 - 2024 Academic Year

ENVIRONMENTAL SYSTEMS: BUILDING DYNAMIC I

Syllabus

Course Description					
Name	**Code**	**Semester**	**T+A Hour**	**Credit**	**ECTS**
ENVIRONMENTAL SYSTEMS: BUILDING DYNAMIC I	ARC3110091	Fall Semester	2+1	2,5	3

Prerequisites Courses	
Recommended Elective Courses	
Language of Instruction	English
Course Level	First Cycle (Bachelor's Degree)
Course Type	Required
Course Coordinator	Assist.Prof. Esra BAYIR
Name of Lecturer(s)	Assist.Prof. Dilek Dilhan ALTINIŞIK
Assistant(s)	Res.Assist. Zübeyde Keskin
Aim	It includes environmental building systems and building installations. It is aimed to examine the relationships of physical environmental control, water control, heating, air conditioning, ventilation, lighting, electrical, mechanical, fire and acoustic systems with the environment, environmental comfort, design, technology and building, and to convey the relevant issues through theoretical and practical explanations.
Course Content	This course contains; The aim, scope and execution of the course, introduction to the course and general concepts / Physical Environmental Parameters,Physical Environmental Control,Physical Environmental Control / City Networks,Plumping in Buildings,Sewage in Buildings,Hot Water in Buildings,Wet Area Design,Practice,Practice,Practice,Practice,HVAC,HVAC,HVAC / Practice / General Revise.

Course Learning Outcomes	**Teaching Methods**	**Assessment Methods**
It is aimed to be conveyed through theoretical and practical lectures on "physical environmental control, water control, heating, air conditioning, ventilation, lighting, electrical, mechanical, fire, acoustic systems" with by connecting relationship with environment, climate, environmental comfort, design, technology, building and structure.	12, 18, 2, 6, 9	A, E

Teaching Methods	12: Problem Solving Method, 18: Micro Teaching Technique, 2: Project Based Learning Model, 6: Experiential Learning, 9: Lecture Method
Assessment Methods	A: Traditional Written Exam, E: Homework

Lecture Schedule

Sequence	**Topics**	**Preliminary Preparation**
1	The aim, scope and execution of the course, introduction to the course and general concepts / Physical Environmental Parameters	
2	Physical Environmental Control	
3	Physical Environmental Control / City Networks	
4	Plumping in Buildings	
5	Sewage in Buildings	
6	Hot Water in Buildings	
7	Wet Area Design	
8	Practice	
9	Practice	
10	Practice	
11	Practice	
12	HVAC	
13	HVAC	
14	HVAC / Practice / General Revise	

Evaluation Methods	**Weight(%)**
Midterm Exam	50
General Exam	50

Resources

1) Neufert, E.; (1997), "Yapı Tasarımı Genel Bilgileri", Güven Kitabevi.
2) Ching, F.D.K., Adams, C.; (2000), "Building Construction Illustrated"; John Willey and Sons.
3) Wise, A.F.E., Swaffield, J.A.; (2002), "Water, Sanitary and Waste Services for Buildings"; Butterworth-Heinemann.
4) Schodek, D.L.; (2000), "Structures", Prentice Hall.
5) Allen, E.; (2005), "How Buildings Work", New York, Oxford University Press.
6) "Building design and construction handbook", McGraw-Hill Companies, Inc. 6th edition, (2001)
7) Arphan, A.; (1975), "Yapı Tesisatı Bölüm 1", Devlet Güzel Sanatlar Akademisi. 8) Alphan, A.; (1985), "Yapıda Sağlık Donatımı", İ.T.Ü. Matbaası.
9) Küçükçalı, R.; (1999), "Mimarın Tesisat El Kitabı, Isısan Çalışmaları No:238", Isısan Yayınları.
10) Küçükçalı, R.; (2008) "Mimarın Tesisat El Kitabı-Cilt 1-2", Isısan Yayınları.The instructor provides the course notes lecturing during the lessons.