

School of Fine Arts Design and Architecture / Architecture

2023 - 2024 Academic Year

FIRE SAFETY in BUILDING DESIGN

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
FIRE SAFETY in BUILDING DESIGN	MIM3115127	Fall Semester	2+0	2	4
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Elective				
Course Coordinator	Assist.Prof. Mustafa ERDEM				
Name of Lecturer(s)	Assoc.Prof. Nuri SERTESER				
Assistant(s)					
Aim	To draw attention to the issues related to fire safety in architectural design, to learn the parameters related to fire safety, which architect will be effective in design, to give information about the legal aspects of the fire safety.				
Course Content	This course contains; Ignition and Combustion, Nature of Fire, Fire Development Stages, Fire Propagation, Fire Spread Between Buildings, Fire Spread inside the Building, Smoke and Toxic Gases, Compartmentation, Determination of Escape Routes, Fire Precautions in Building Elements, Structural Fire Protection, Smoke Ventilation, Burning Properties of Building Materials, MIDTERM, Architectural Design Issues in National Fire Regulations, Case Studies, Architectural Design Issues in National Fire Regulations, Case Studies, Architectural Design Issues in National Fire Regulations, Case Studies, Architectural Design Issues in National Fire Regulations, Case Studies, Evaluation and analysis.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
Understanding the nature of the fire and its effects on the buildings Understanding the form of fire propagation and its consequences Learning the precautions against fire in architectural Project			16, 9	A, E	
Teaching Methods	16: Question - Answer Technique, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Ignition and Combustion, Nature of Fire, Fire Development Stages				
2	Fire Propagation, Fire Spread Between Buildings				
3	Fire Spread inside the Building, Smoke and Toxic Gases				
4	Compartmentation, Determination of Escape Routes				
5	Fire Precautions in Building Elements				
6	Structural Fire Protection, Smoke Ventilation				
7	Burning Properties of Building Materials				
8	MIDTERM				
9	Architectural Design Issues in National Fire Regulations, Case Studies				
10	Architectural Design Issues in National Fire Regulations, Case Studies				
11	Architectural Design Issues in National Fire Regulations, Case Studies				
12	Architectural Design Issues in National Fire Regulations, Case Studies				
13	Architectural Design Issues in National Fire Regulations, Case Studies				
14	Evaluation and analysis				
Evaluation Methods		Weight(%)			
Midterm Exam		50			
General Exam		50			

Resources
<p>Fergusson, L.H., Janicak, C.A.(2015). Fundamentals of Fire Protection for the Safety Professional, London: Bernan Press.</p> <p>Brannigan, F. L.& Corbett, G.P. (2008). Brannigan's Building Construction for the Fire Service, NFPA, Burlington, MA : Jones & Bartlett Learning, LLC.</p> <p>Robertson, J. C. (2010). Introduction to Fire Prevention, Upper Saddle River, New Jersey: Prentice Hall Health.</p> <p>Quintiere, J. G. (2006). Fundamentals of Fire Phenomena, Chichester : John Wiley.</p> <p>Lataille, J. (2003). Fire Protection Engineering in Building Design, Amsterdam : Butterworth-Heinemann.</p> <p>Patterson, J. (1993). Simplified Design for Building Fire Safety, New York : Wiley.</p> <p>Türkiye Yangından Korunma Yönetmeliği 2015, TÜYAK.</p>