



COURSE INFORMATION FORM

Course Name	Course Code
BUILDING PHYSICS AND INSULATION	151418704

Semester	Number of Course Hours per Week		ECTS
	Theory	Practice	
8	3	0	6

Course Category (Credit)				
Basic Sciences	Engineering Sciences	Design	General Education	Social
	3	3		

Course Language	Course Level	Course Type
Turkish	Undergraduate	Elective

Prerequisite(s) if any	
Objectives of the Course	Recognizing insulation types Learning the materials and application methods used.
Short Course Content	The concepts of building physics, building physics events in buildings, the importance of insulation in constructions, types of insulation; heat, water, steam, sound, vibration and fire insulation, properties of insulation materials, insulation applications.

Learning Outcomes of the Course	Contributed PO(s)	Teaching Methods *	Measuring Methods **
1 Determining the precautions to be taken against the structural physics events in the buildings	1, 7	1,2,5,6,15	A, D
2 Choosing appropriate materials	2, 3, 5	1,2	A, D
3 Acquiring the ability to apply them.	4, 6, 9	1,2,5,6,15	A, D
4 To be able to produce and apply appropriate solutions to different building physics subjects that serve different purposes	8, 10, 11	1,2,5,6,15	A, D
5			
6			
7			
8			

***Teaching Methods** 1:Expression, 2:Discussion, 3:Experiment, 4:Simulation, 5:Question-Answer, 6:Tutorial, 7:Observation, 8:Case Study, 9:Technical Visit, 10:Trouble/Problem Solving, 11:Individual Work, 12:Team/Group Work, 13:Brain Storm, 14:Project Design / Management, 15:Report Preparation and/or Presentation

****Measuring Methods** A:Exam, B:Quiz, C:Oral Exam, D:Homework, E:Report, F:Article Examination, G:Presentation, I:Experimental Skill, J:Project Observation, K:Class Attendance; L:Jury Exam

Main Textbook	Yapı Malzemesi ve Yapı Fiziği İlişkisi, Sabit Oymael, Birsen Yayınevi, 2016, İstanbul.
Supporting References	Eriç, M., Yapı Fiziği ve Malzemesi, Literatür Yayıncılık, İstanbul,2014. Tekin Ç., Diri C. ve Bonfil J., Mimari Yapılarda Su Yalıtımı, YEM, 2016. Topçuoğlu K., Yalıtım Teknolojisi, Nobel Akademik Yay., Ankara, 2014. Altınışık K., Isı Yalıtımı, Nobel Akademik Yayıncılık, Ankara, 2016. Ekinci C.E., Yalıtım Teknikleri, Nobel Akademik Yay., Ankara, 2003. Pinterić, M., Building Physics, Springer International Publishing, 2017, ISBN 978-3-319-57484-4.
Necessary Course Material	

Course Schedule	
1	Concepts and subjects of building physics
2	Advantages and types of insulation in buildings
3	Thermal effects
4	Principles of thermal insulation calculations
5	Thermal insulation materials and applications
6	Water and humidity effects
7	Waterproofing materials and applications
8	Mid-Term Exam
9	Acoustic
10	Soundproofing materials and applications
11	seismic isolators and applications
12	seismic isolators and applications
13	fireproofing materials and applications
14	fireproofing materials and applications
15	Vibration isolators and applications
16,17	Final Exam

Calculation of Course Workload			
Activities	Number	Time (Hour)	Total Workload (Hour)
Course Time (number of course hours per week)	14	3	42
Classroom Studying Time (review, reinforcing, prestudy,...)	14	4	56
Homework	5	10	50
Quiz Exam	1	0	0
Studying for Quiz Exam	1	0	0
Oral exam	1	0	0
Studying for Oral Exam	1	0	0
Report (Preparation and presentation time included)	1	0	0
Project (Preparation and presentation time included)	1	0	0
Presentation (Preparation time included)	1	0	0
Mid-Term Exam	1	2	2
Studying for Mid-Term Exam	1	14	14
Final Exam	1	2	2
Studying for Final Exam	1	14	14
Total workload			180
Total workload / 30			6
Course ECTS Credit			6

Evaluation	
Activity Type	%
Mid-term	40
Quiz	
Homework	10
Bir öge seçin.	
Bir öge seçin.	
Final Exam	50
Total	100

RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO) (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low)		
NO	PROGRAM OUTCOME	Contribution
1	Sufficient knowledge of engineering subjects related with mathematics, science and civil engineering; an ability to apply theoretical and practical knowledge on solving and modeling	3
2	Ability to determine, define, formulate and solve complex civil engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods.	4
3	Ability to design a complex system, a component and/or an engineering process under real life constrains or conditions, defined by environmental, economical and political problems; for	3
4	Ability to develop, select and use modern methods and tools required for civil engineering applications; ability to effective use of information technologies.	3
5	In order to investigate civil engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results.	4
6	Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence.	2
7	Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language.	3
8	Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement.	4
9	Understanding of professional and ethical issues and taking responsibility	3
10	Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development.	3
11	Knowledge of actual problems and effects of engineering applications on health, environment and security in global and social scale; an awareness of juridical results of engineering	3

LECTUTER(S)				
Prepared by	Assoc. Prof. Dr. Mehmet CANBAZ			
Signature(s)				

Date:06.06.2024