

ARCHITECTURAL ACOUSTICS II

1	Course Title:	ARCHITECTURAL ACOUSTICS II
2	Course Code:	MIM4048
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	8
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	NONE
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Öğr. Gör. ZEYNEP BORA ÖZYURT
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	zbozyurt@uludag.edu.tr
17	Website:	
18	Objective of the Course:	<p>Acoustic design in architecture is the design process aimed at providing acoustic comfort conditions suitable for functions. Health and efficient buildings can be provided by means of providing he acoustic comfort conditions.</p> <p>Residences, offices, hotels, hospitals, sports halls, schools, theaters, opera-concert halls, transportation structures, religious buildings, shopping malls, entertainment centers, etc. All structures built for human use and covered by architecture are within the scope of architectural acoustics.</p> <p>The aim of the Architectural Acoustics II course is to enable students to learn the criteria that should be considered in order to provide acoustic comfort conditions and to produce appropriate solutions within the framework of building acoustics.</p> <p>The noise sources in the built environment, the effects of noise on people, criteria and standards, measurement techniques., detail design for noise control in volumes with different functions and between volumes are covered within this course.</p> <p>This course will be conducted via face-to face. In the transfer of theoretical knowledge, computer presentations will be used. Occasionally studio work will be carried out with students and they will be asked to make presentations. At the end of the semester, each student will submit a graduation project which they will develop throughout the semester with critiques.</p>
19	Contribution of the Course to Professional Development:	The lecture will give students the ability to analyze the theoretical knowledge gained within the course and offers solutions to problems encountered in practice. It will give students the awareness of professional and ethical responsibility.
20	Learning Outcomes:	
	1	To acquire basic knowledge of acoustic theory
	2	Basic knowledge of building acoustics
	3	To learn how to control transmission of sound and noise

	4	Acquiring the skills of selecting suitable building materials for acoustic requirements		
	5	Acquiring the skills of selecting suitable building materials for acoustic requirements		
	6	Acquiring the skills of developing suitable details for acoustic requirements		
	7	To acquire basic knowledge about mechanical / environmental noise and vibration control		
	8			
	9			
	10			
21	Course Content:			
	Course Content:			
Week	Theoretical	Practice		
1	Introduction to Acoustics			
2	Basic Building Acoustics Theory			
3	Standarts & criteria Acoustical comfort levels and allowable sound limits			
4	Background noise control			
5	Sound isolation performances of building elements			
Activites		Number	Duration (hour)	Total Work Load (hour)
7	Sound isolation performances of building elements	14	2.00	28.00
Practicals/Labs		0	0.00	0.00
Self study and preparation of final project	Lecture / In-class studio works – Research presentations of final project	10	2.00	20.00
Homeworks		7	4.00	28.00
Projects	Introduction to architectural acoustics Isolation calculation program	1	5.00	5.00
Field Studies		0	0.00	0.00
Midterm exams	Lecture / Critiques on final projects	1	1.00	1.00
Others		0	0.00	0.00
Final Exams	Lecture / In-class studio works	1	4.00	4.00
Total Work Load				87.00
11	Environmental noise control			2.87
ECTS Credit of the Course				3.00
12	Noise barriers			
	Lecture / Critiques on final projects			
13	Critiques on final projects			
14	Critiques on final projects			
22	Textbooks, References and/or Other Materials:	1. Egan M., David, Architectural Acoustics, McGraw-Hill INC., NewYork, 1988. 2. Long, M., Architectural Acoustics, Academic Press, 2014. 3. L.L. Beranek., Acoustics, ASA, NY, 1993. 4. Turkish Regulation on Protection of Buildings from Noise		
23	Assesment			

TERM LEARNING ACTIVITIES		NUMBER	WEIGHT
Midterm Exam		1	30.00
Quiz		2	10.00
Home work-project		5	10.00
Final Exam		1	50.00
Total		9	100.00
Contribution of Term (Year) Learning Activities to Success Grade			50.00
Contribution of Final Exam to Success Grade			50.00
Total			100.00
Measurement and Evaluation Techniques Used in the Course			Class attendance, assignments and in-class work will constitute 20% of the total course grade. Mid-term exam will constitute 30% of the total course grade. There will be no final exam, final evaluation will be conducted through a project submission.

24 ECTS / WORK LOAD TABLE

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0
ÖK2	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0
ÖK3	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0
ÖK4	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0
ÖK5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0
ÖK6	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0
ÖK7	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low		3 Medium		4 High		5 Very High							