

# TOROS ÜNİVERSİTESİ

Faculty Of Fine Arts, Design And Architecture  
Architecture

## Course Information

EARTHQUAKE RESISTANT DESIGN					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
ARC436	Spring	2	0	2	3

<b>Prerequisites and co-requisites</b>	None
<b>Language of instruction</b>	Turkish
<b>Type</b>	Required
<b>Level of Course</b>	Bachelor's
<b>Lecturer</b>	Department Instructors
<b>Mode of Delivery</b>	Face to Face
<b>Suggested Subject</b>	None
<b>Professional practise ( internship )</b>	None
<b>Objectives of the Course</b>	Convey the information and experiences that the buildings might be safer during an earthquake through architectural design/form itself.
<b>Contents of the Course</b>	What is an earthquake, Definition of Regulations on the Buildings in Disaster Areas, Concepts of Ordered Structure and Disordered Structure, Irregularities in Plan and Intersection Planes, Performances of Ordered Geometric Forms During an Earthquake, Benefits and Development Details of Earthquake Dilatations, Determination of Causes of Damages in Buildings damaged in an Earthquake through Examples, Acquisition of Earthquake-Proof Buildings through the Support of Technology-Definition of related Technologies

## Learning Outcomes of Course

#	Learning Outcomes
1	At the end of this course, students will be able to apply concepts of 'Earthquake resistant design '
2	At the end of this course, students will be able to apply extensions of 'Earthquake resistant design ' .
3	At the end of this course, students, will be able to look from 'Earthquake and Design ' in terms of experiential dealings
4	At the end of this course, students, have ability for the self improvement about 'Earthquake resistant design '

## Course Syllabus

#	Subjects	Teaching Methods and Technics
1	Contents and Objectives, What is an Earthquake, Evaluation of the Forms/Designs of Buildings Damaged in Large Earthquakes in Turkey and in the World.	Definition and basic introduction to the field
2	Definition of the Philosophy of Regulations on Buildings on Disaster Areas and Expression of Sections associated with the Architectural Design through Shapes and Examples.	Reading: Guidelines for Use of the Principles of Universal Design (Guidelines for Use of the Principles of Universal Design)
3	Expression of the Regulation on Buildings in Disaster Areas, Ordered-Disordered Structures, Irregularities in Plan/Intersection, Significance Coefficients of Buildings through Examples.	Research: Resources on Universal Design
4	Determination by the Students of the Causes of Damages in Buildings damaged in an	Homework 1: Answering Questions on the Course Webpage.

	Earthquake/Methods of Preventing the Development of Damage.	
5	Comparison of In-Situ Systems and Prefabricated Systems in terms of Earthquake Safety-Examination of the Support of Technology in this Respect.	Reading: The Universal Design File: Designing for People of All Ages and Abilities, UDF.12.98, Molly Story, James Mueller, and Ron Mace, 1998, 164 pp. The Universal Design File discusses the history of universal design and provides excellent illustrations of each principle. Seven in-depth case studies are profiled. This book was the first comprehensive look at the concept and application of universal design in products and the built environment.
6	Definition of Earthquake Isolators and Posttensioned-Ala-Sawa Construction Technology.	Reading: Toy Guide for Differently Abled Kids (www.toysrus.com) * REPORT PROPOSAL SUBMISSION
7	Review of the Knowledge of Students on the Issue under the Question titled "What did we Learn in this Course?" and Preparations to the Mid-term Exam.	Reading: Housing for the Lifespan of All People, HSUD.8.97, 1988, reprint 1994. This pamphlet provides an introduction to the concept of universal design and its application in the home. Universal design features, applications, and design solutions for the home are included.
8	Mid-term Exam.	
9	Review of Answers to Mid-term Exam Questions. Introduction of Project/Assay	Homework 2: Answering Questions on the Course Webpage. Reading: Case Studies on Universal Design, CSUD.5.98, 1998, 65+ pp. 14 case studies, which describe universal design solutions and demonstrate successful introductions of universal design in the marketplace are included in this book. The case studies illustrate one or more of the seven Principles of Universal Design developed under the direction of The Center for Universal Design.
10	Reconsideration of the Architectural Designs of Students performed in Previous Semester through their Knowledge in terms of Earthquake-proof Building Designs-Designing-Arranging the Same or Performing a New Issue Selected through Workshop Study through the Principles of Earthquake-Proof Design.	Reading: Case Studies on Universal Design, CSUD.5.98, 1998, 65+ pp. 14 case studies, which describe universal design solutions and demonstrate successful introductions of universal design in the marketplace are included in this book. The case studies illustrate one or more of the seven Principles of Universal Design developed under the direction of The Center for Universal Design.
11	Continuation of the Issue Studied in Week 10.	Reading: Reading: Case Studies on Universal Design, CSUD.5.98, 1998, 65+ pp. 14 case studies, which describe universal design solutions and demonstrate successful introductions of universal design in the marketplace are included in this book. The case studies illustrate one or more of the seven Principles of Universal Design developed under the direction of The Center for
12	Continuation of the Issue Studied in Week 10.	* POSTER SUBMISSION
13	Continuation of the Issue Studied in Week 10.	Definition and basic introduction to the field
14	Delivering the Issue started in Week 10 in the format of Project/Assay consisting of the Preface, Report, Plan, Intersection, Two Details.	Reading: Guidelines for Use of the Principles of Universal Design (Guidelines for Use of the Principles of Universal Design)
15	Semester Revision	Research: Resources on Universal Design
16	Final Exam	

## Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Semih S. Tezcan (1998). Journal of an Architect. Türkiye Deprem Vakfı Yayınları. İstanbul,		
2	E. Erman (2002). Earthquakes and Earthquake-Proof Architectural Design. Faculty of Architecture, Middle East Technical University. 975-429-197-7		
3	web		

## Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

## Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	At the end of this course, students will be able to apply concepts of 'Earthquake resistant design ' ,	3,10	1,2
2	At the end of this course, students will be able to apply extensions of 'Earthquake resistant design ' .	3,10	1,2
3	At the end of this course, students, will be able to look from 'Earthquake and Design ' in terms of experiential dealings	13	1,2
4	At the end of this course, students, have ability for the self improvement about 'Earthquake resistant design ' .	1,3,13	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

## Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	2	28
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	2	28
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	5	5
8	Midterm Exam	1	2	2
9	Quiz	0	0	0
10	Homework	4	5	20
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	0	0	0
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	5	5
16	Final Exam	1	2	2
				<b>90</b>