

COURSE RECORD

Code	ARCH 527
Name	Natural Hazards and Architecture
Hour per week	3 (3+0)
Credit	3
ECTS	7
Level/Year	Graduate
Semester	Fall
Type	Elective
Location	
Prerequisites	
Special Conditions	
Coordinator(s)	Dr. Müge AKIN
Webpage	
Content	Earthquake and other natural disasters, and human-induced disasters triggered by industrialization and technological progress, are increasingly causing loss of life and property. It is included in this course to be prepared for these sudden disasters, to recognize the types of disasters, to take precautions for these repeated events and to make the necessary plans before and after the disasters.
Objectives	<ul style="list-style-type: none"> - To recognize natural and unnatural disasters with an interdisciplinary approach - To be able to plan architectural designs against potential disasters - To be able to define the factors that create disasters - Having information against disaster management
Learning Outcomes	L01 Categorizing the concepts of disaster and risk L02 Exposing of disaster types and their effects on cities and structures L03 Evaluating measures for disaster types L04 Exposing and managing the risks of disasters in architectural projects
Reading List	<ul style="list-style-type: none"> - (IHDP_Future Earth-Integrated Risk Governance Project Series) Peijun Shi, Roger Kaspersen (eds.) - World Atlas of Natural Disaster Risk-Springer-Verlag, DeVecchio, Duane E.; Keller, Edward A. (eds.), Publisher: Routledge, Year: 2019, ISBN: 9781138352216,1138352217 - Abbott, Patrick L., 2017. Natural disasters. Tenth edition. Published by McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121. - Lecture notes and various articles
Watching list	Films <ul style="list-style-type: none"> - San Andreas (2015) - Geostorm (2017) - The core (2003) - The day after tomorrow (2004) Documentaries <ul style="list-style-type: none"> - Hurricane Katrina - Iceland Erupts - Natiaol Geographic Planet – National Geographic Disaster Planet – Japan tsunami - BBC volcano live 1 - 101 videos-National Geographic Adiditonal films, documentaries and suggested materials will be announced!
Ethical Rules and Course Policy	

LEARNING ACTIVITIES

Activities	Number	Weight (%)
Lecture	3	25%
Group Works	4	25%
Presentations	5	25%
Site Visits	2	25%
Total		100

ASSESSMENT

Evaluation Criteria	Weight (%)
Quizzes	10%
Group Project Assignments & Presentations	30%
Midterm submission	25%
Final project	35%
Total	100%

For a detailed description of grading policy and scale, please refer to the website <https://goo.gl/HbPM2y> section 28.

COURSE LOAD

Activity	Duration (hour)	Quantity	Work Load (hour)
In class activities	2	14	28
Lab	1	14	14
Group work	6	7	42
Research (web, library)	5	7	35
Required Readings	3	10	30
Pre-work for Presentation	3	5	15
Lab reports	2	5	10
General Sum			174

ECTS: 7 (Work Load/25-30)

CONTRIBUTION TO PROGRAMME OUTCOMES*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
L01	4	2	3	2	4	4	5	4	5	4	4	2
L02	3	3	5	5	4	5	4	3	5	3	3	2
L03	4	3	3	3	3	5	4	4	5	4	4	3
L04	4	4	2	5	4	5	4	4	5	3	4	3

* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

WEEKLY SCHEDULE

W	Topic	Outcomes
1	Introduction	L01
	Introduction to the concepts of disaster and risk	
2	Hazards and types of hazards (Discussion of the related topics-discussion)	L01, L02
3	Technological hazards and examples (Working on the examples)	L01, L02
4	Introduction to Natural Hazards (Groupwork discussion)	L01, L03
5	Landslides (Working on the examples)	L02, L03
6	Avalanches (Working on the examples)	L02, L03
7	Floods (Working on the examples)	L02, L03
8	Volcanic activities (Working on the examples)	L02, L03

9	Tornados (Working on the examples)	L02, L03
10	Fires (Working on the examples)	L02, L03
11	Earthquakes (Working on the examples)	L02, L03
12	Earthquake damages (Working on the examples)	L02, L03, L04
13	Hazard and risk (Group work presentation)	L02, L03, L04
14	Hazard and risk management (Group work presentation including examples)	L02, L03, L04

Dr. Müge AKIN
09.06.2020