

University of Management and Technology

Course Outline

Course code: DM111/ PA402

Course title: Basic Science of (Socio-)Natural Disasters

Program	BS in Disaster Management
Credit Hours	3
Duration	16 weeks
Prerequisites	None
Resource Person	Ms. Shaiza Khawaja
Counseling Timing	Wednesdays (9:00pm - 11:00pm)
Contact	shaiza.khawaja@umt.edu.pk

Chairman/Director signature.....

Dean's signature.....

Date.....

Learning Objectives:

Upon Successful completion of this course, the student will demonstrate the ability to:

- **Differentiate** between the different types of hazards (natural, socio-natural, technological, biological).
 - **Understand** that disasters occur when a hazardous event interacts with human society.
 - **Understand** the 5 Fundamental Concepts as applied to hazards.
 - **Understand** the basic concept, process, impacts, and effects of major hazards (earthquakes, tsunami, volcanoes, floods, landslides, land subsidence, hurricanes, coastal hazards, and climate change).
 - **Apply** the 5 Fundamental Concepts to the above major hazards and disasters.
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Learning Methodology:

- **Lectures**
 - **Written Assignments**
 - **In-class Discussions**
 - **Group Project**
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Grade Evaluation Criteria:

Marks Evaluation	Marks in %
Class Participation	5%
Assignments	10%
Quizzes	10%
Group Project	10%
Mid Term	25%
Final Exam	40%

Course Textbook:

Keller, E. A. and DeVecchio, D. E. (2019) (5th ed.) *Natural Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes*, London: Routledge.

Recommended Textbooks:

Blaikie, P., Cannon, T., Davis, I. and Wisner, B. (2004)(2nd ed.) *At Risk: Natural Hazards, People's Vulnerability and Disasters*, London: Routledge.

Calendar of Course contents to be covered during semester

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Week	Contents	Reference Ch(s)
1	<ul style="list-style-type: none">• Introduction to Course and Course Outline• Lecture 1: Introduction to Natural Hazards	1
2	<ul style="list-style-type: none">• Lecture 1: Introduction to Natural Hazards• Lecture 2: Structure of Earth and Plate Tectonics	1, 2
3	<ul style="list-style-type: none">• Lecture 3: Earthquakes	3
4	<ul style="list-style-type: none">• Lecture 4: Earthquakes	3
5	<ul style="list-style-type: none">• Quiz 1 (Earthquakes)• Lecture 5: Tsunami	4
6	<ul style="list-style-type: none">• Lecture 6: Volcanoes	5
7	<ul style="list-style-type: none">• Lecture 7: Volcanoes	5
8	Mid-Term Exam	
9	<ul style="list-style-type: none">• Lecture 8: Floods	6
10	<ul style="list-style-type: none">• Lecture 9: Floods	6
11	<ul style="list-style-type: none">• Lecture 10: Landslides	7
12	<ul style="list-style-type: none">• Quiz 2 (Floods)• Lecture 11: Land Subsidence	8
13	<ul style="list-style-type: none">• Lecture 12: Atmospheric Processes and Severe Weather	9
14	<ul style="list-style-type: none">• Submission of Group Project• Lecture 13: Climate Change	12
15	<ul style="list-style-type: none">• Revision	
16	Final Exam	