

Annexe A: New/Revised Course Content in OBTL+ Format

Course Overview

The sections shown on this interface are based on the templates [UG OBTL+](#) or [PG OBTL+](#)

If you are revising/duplicating an existing course and do not see the pre-filled contents you expect in the subsequent sections e.g. Course Aims, Intended Learning Outcomes etc. please refer to [Data Transformation Status](#) for more information.

Expected Implementation in Academic Year	
Semester/Trimester/Others (specify approx. Start/End date)	
Course Author * Faculty proposing/revising the course	Wei Shengji (Asst Prof);#210
Course Author Email	shjwei@ntu.edu.sg
Course Title	NATURAL HAZARDS & SOCIETY
Course Code	ES5001
Academic Units	0
Contact Hours	39
Research Experience Components	

Course Requisites (if applicable)

Pre-requisites	None
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

Course Aims

This is an introductory and general education course that aims to provide you with background knowledge on the range of natural hazards that may affect the human society. You will learn about the geological and geographic setting of different natural hazards, the physical processes that create the hazards, their potential social impacts and how or if the impacts can be mitigated. You will also study key hazardous sites and events and gain an insight into hazard and risk assessment, as well as a thorough understanding of the natural hazards threatening humans.

Course's Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, you (student) would be able to:

ILO 1	Identify the range of natural hazards, and explain where they occur, why and how (LO1).
ILO 2	Formulate well-reasoned arguments about the assessment and management of past hazards and disasters, based on the literature and your new knowledge of hazards and impacts (LO2).
ILO 3	Articulately present to others the hazards expected in any location around the world (LO3).

Course Content

The class content will be organised as learning about the where and why, the physical processes (hazards), their impacts and any possible mitigation strategies for a range of different natural hazards, including Landslide, Volcano, Earthquake, Tsunami, Flood, Typhoon, Climate, Wildfire and human induced hazards. Each topic will be covered by a three-hour formal lecture. In addition to these topic-based lectures, there will be an introductory class will present key terms and concepts around natural hazards. In the middle of each class (except the first two week), students will have 10-20 questions for quiz. 3-10 clicker questions will be asked in each topic based lectures to stimulate critical and out-of-the-box thinking.

Reading and References (if applicable)

1) Natural Hazards and Disasters (Paperback) by Donald Hyndman, David Hyndman. 2) A key element of this course is to train students to make effective use of the primary scientific literature, and so they are encouraged to read scientific articles, websites and review articles so that they can explain to their friends and families the basic features of these natural hazards and what we can do to mitigate the impacts.

Planned Schedule

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
1	Setting the stage and summary of the class	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
2	Plate Tectonics and Earthquakes	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
3	Tsunamis	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
4	Volcano system	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
5	Volcanic hazards	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
6	River systems and floodplain hazards	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
7	Delta hazards, flooding and urbanization				
8	Recess week	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
9	Cyclones and storms	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
10	Climate system	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
11	Climate change at different time scales	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
12	Human Impact to Climate Change	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	
13	Other human-induced natural hazards and space weather	1,2,3	Relevant chapter in main text book and video lecture (if applicable)*	In-person	

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
14	Review Session	1,2		In-person	

Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Lecture	To effectively convey information on fundamental theories and key concepts and to bring all of you up to similar levels of knowledge (Course LO1)
Clicker question and quiz	Various questions are designed to help you analyze, formulate and communicate a deep understanding of topics that are fundamental to natural hazard and risk assessment (CLO1, CLO2, CLO3)

Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Team/Individual	Rubrics	Level of Understanding
1	Continuous Assessment (CA): Others([class participation])	1,2,3	Programme LO 1,2, 3,4, 5	20	Individual		
2	Continuous Assessment (CA): Others([quiz/test])	1,2	Programme LO 1, 3, 5	30	Individual		
3	Summative Assessment (EXAM): Others([final examination])	1,2	Programme LO 1, 3, 5	50	Individual		

Description of Assessment Components (if applicable)

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Formative Feedback

You will receive oral feedback for Component 1, scores and work through of correct answers for Component 2.

NTU Graduate Attributes/Competency Mapping

This course intends to develop the following graduate attributes and competencies (maximum 5 most relevant)

Attributes/Competency	Level
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Course Policy

Policy (Academic Integrity)

Policy (General)

(1) General

Students are expected to watch all pre-class videos, attend all lectures and answer clicker questions, and participate in class quiz. Students are expected to take responsibility to follow up with course notes and course related announcements for seminar sessions they have missed. Students are expected to participate in all in-class events and the final exam.

Policy (Absenteeism)

(2) Absenteeism

Absence from any part of the course without a valid reason will affect your overall course grade. Valid reasons include falling sick supported by a medical certificate. There will be limited make-up opportunities. If you miss a lecture or discussion group exercise you must inform me via email (shjwei@ntu.edu.sg) prior to the start of the class.

Policy (Others, if applicable)

(3) Compulsory Assignments

You are required to participate in class clicker questions and quiz, unless a valid reason is provided. Valid reasons include falling sick supported by a medical certificate.

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