



Academic Year 2020-2021

Syllabus

Natural Disasters: Prevention and Reaction

CFU 6

Prof. Donato Abruzzese, Prof. Erdem Ergin

Course Description

Change brings uncertainty, for the better or worse. When uncertainty is associated with negative results, it is called risk. And when uncertainty is associated with positive results, it is called opportunity. Both risk and opportunity are probabilities, meaning they did not happen yet. As individuals, businesses, governments and society, we strive for change. Our decision-making process is shaped by how we understand the risk & opportunities around us, what is acceptable and what is not, and how we manage crises if things go bad. This course provides a systematic approach to before, during and after a crisis or disaster. It builds on personal experience of students and recent events across the world. It also covers how factors such as rapid urbanization, demographic shift, consumption patterns etc. affect the risk in our societies and the systemic shock brought by climate change. The capacity to understand our risk and to manage it is a core tool to manage change. And as individuals, as governments, as businesses, as societies we change. This course aims to increase your capacity in managing change. The learning objectives are:

- Understand key concepts governing before, during and after a crisis.
- Acquire practical tools such as scenario, life safety, seizing an event to manage crises.
- Learn how to apply these strategies into various fields of work.

Teaching Method

The material will be covered using a mix of lectures, class discussions, simulations and hands-on exercises. Regular class attendance and active participation are expected, as they will help achieve the learning goals and contribute to an overall positive learning environment.

Schedule of Topics

Session 1	Concepts: risk, disaster and resilience
Session 2	Natural hazards
Session 3	Disaster management – warning
Session 4	Disaster management – response
Session 5	Disaster management – coordination
Session 6	Recovery – impact assessment
Session 7	Recovery – socio-economic recovery
Session 8	Recovery – reconstruction
Session 9	Risk management – risk assessment
Session 10	Risk management – risk reduction
Session 11	Risk management – risk transfer
Session 12	Risk management – preparedness
Session 13	Developing a scenario
Session 14	Developing a scenario
Session 15	Case Study 1: life safety
Session 16	Case Study 2: socio-economic recovery
Session 17	Case Study 3: critical infrastructure
Session 18	Overall course review

Textbook and Materials

The course is presented as distinct stand-alone modules that complete each other. The instructor will circulate the presentation and material used in class after each class session. For those interested in acquiring more material, a good reference textbook is: Introduction to International Disaster Risk Management, Damon Coppola, (3rd edition), 2015, Butterworth-Heinemann. This is NOT a mandatory textbook.

Assessment

The grading will be based on the following: keep a class journal (35%), final exam (50%), and class participation (15%). Both the test and final will be written exams.

Non-attending students (more than 20% absence) will receive class material and directly take the final exam.

In case students reject their final exam score, they can retake the exam at a later date. In this case all previous scores from the class journal and the tests are voided. The score the student gets from the retake of the final becomes their course grade.

Office hours

Erdem Ergin, upon appointment (erdemergin6@gmail.com).