UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Environmental Geology and Territorial Management

2223-1-F7501Q102-F7501Q109M

Aims

To provide knowledge and acquire on geological environmental resources and in particular on the relationship between man and geological environment. The objective is to make the student to have autonomous judgment on the sustainable use of geological resources.

The course deals with the concept of environmental sustainability applied to geological resources; in this context will be analyzed the main geological resources and the impact that man has on these resources. Among the geological resources is also included the concept of landscape, prodrome to analyze the principles of land use planning.

The keys to the reading of the problems of environmental sustainability applied to the geological environment are then provided (concept of territorial sustainability).

Contents

Contents:

1. Introduction to environmental geology
   basic concepts of the meaning of geology, environment and territory are

2. Relationship between Man and the Environment,
   (a)human population development,
   b)the geological components of the environment.

3. Environmental geological resources
   a)Fossil Resources
   b)Water Resources: surface water and groundwater

4 Sustainable Development
a)Concept of environmental sustainability and sustainable development

5. Sources of energy transformation

6. Human impact on the geological environment
   a) Water
   b) Subsoil

7. .Relationship between Environmental Geology and Territorial Planning

8. Impact of geological processes on human activities
   a) Risk and Hazard
   b) Earthquakes

Detailed program

Contents:

1. Introduction to environmental geology

2. Human-Environment Relationship,

(a) human population development,

(b) geological components of the environment.

3. Environmental geological resources
   a) Fossil Resources

b) Water resource: surface water and groundwater

4. Sources of energy transformation, territorial externalities

a) Non-renewable Sources

Fossil fuels
Nuclear energy
b) Renewable sources
Hydroelectric energy
Geothermal energy
Solar energy
Wind energy
Biomass energy
Tidal Energy

5. Sustainable Development

a) Concept of environmental sustainability and sustainable development

6. Human impact on the geological environment

a) Water

b) Subsoil

7. Relationship between man and territory: land governance
   a) PRG, municipality planning
   b) PGT. urban plannig management
   c) Superordinate planning
   d) River contracts

8. Impact of geological processes on human activities

a) Concept of Risk
b) Seismic Hazard

a

9. Geothematic Cartography

Prerequisites

Basic elements of Geology, Petrography, Geophysics and Physical Geography.

Teaching form

- 48 hours of Lessons tutorials, 6 credits

Textbook and teaching resource

Semester

first semester

Assessment method

The examination of this module includes:

- a written report (max 10-15 pages) on a topic chosen by him/her, pertaining to the topics covered in the course,

- interview with discussion of the report.
  In the oral interview you will be asked to coherently state how, starting from the objectives of the report, you arrived at your conclusions. In addition, questions will be asked linking with the other topics covered in the course and ending with the conclusions.

Office hours

To be agreed by email

Sustainable Development Goals

AFFORDABLE AND CLEAN ENERGY | SUSTAINABLE CITIES AND COMMUNITIES | LIFE ON LAND