

## MODULE DESCRIPTION

### General

School	Geotechnical Sciences
Department	Forest and Natural Environment Sciences

### Module Information

Title	Hydrogeomorphology and Hydrologic Disasters
Course Code	D.Y.2
Level of Studies	Bachelors
Teaching Period	4 <sup>th</sup> Semester
Attendance Type	Core - Mandatory
Prerequisites	-

Orientation	Weekly Hours		Year	Semester	ECTS
	Lectures	Laboratory work			
Management, protection of natural resources and climate change	2	3	2 <sup>th</sup>	4 <sup>th</sup>	6

### Faculty Instructor

\_\_\_\_\_Dimitrios Emmanouloudis – Professor / George Zaimes – Assistant Professor\_\_\_\_\_

### Type of Module

- General Foundation
- Specific Foundation / Core
- Knowledge Deepening / Consolidation

### Mode of Delivery

- Face to face
- Distance learning

### Digital Module availability

- E-Study Guide
- Departments Website
- E-Learning

### Language

	Teaching	Examination
Greek	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
English	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## Erasmus

- The course is offered to exchange programme students

## Learning Outcomes

The course provides basic knowledge on torrents and their properties in Greece and the different types of hydrological disasters

The purpose of the course is to understand the phenomena that cause torrents and various hydrological disasters, to categorize them and to recognize their most important properties and characteristics.

Upon successful completion of the course the student will be able to:

- Know basic geomorphologic principles
- Understand the main phenomena of producing sediments
- Classify torrents
- Calculates the morphometric and morphologic characteristics of torrents
- Understand the importance of forests and vegetation for torrents
- Know the basic categories of hydrological disasters
- Be aware of the main features of hydrological disasters

## List of General Competences

- Apply knowledge in practice
- Work autonomously
- Work in teams
- Work in an international context
- Work in an interdisciplinary team
- Respect natural environment
- Advance free, creative and causative thinking

## Module Content (Syllabus)

The subject matter of the course is the investigation of torrents, rivers, the morphometric and morphologic characteristics of mountain watersheds, the classification of torrents. Emphasis is placed on the types of torrent phenomena that can develop and on their mechanism of activation. The mechanisms of degradation and desertification of mountainous areas, the movement of sediment and their deposition in catchments, and the role of forest and vegetation are also investigated. The categories of hydrological disasters and what are the most common hydrological disasters in Greece are described. The main characteristics and conditions of the hydrological disasters.

Keywords: Hydrogeomorphology, Torrents, Sediment, Categories of hydrological disasters, Characteristics of hydrological disasters

## Educational Material Types

- Book
- Notes
- Slide presentations

- Video lectures
- Multimedia
- Interactive exercises
- Other:

### Use of Information and Communication Technologies

- Use of ICT in Course Teaching
- Use of ICT in Laboratory Teaching
- Use of ICT in Communication with Students
- Use of ICT in Student Assessment

### Module Organization

Please fill in the workload of each course activity

Course Activity	Workload (hours)
Lectures	39
Laboratory work	26
Field Trip/Short Individual Assignments	45
Independent Study	40
<b>Total</b>	<b>150</b>

\* 1 ECTS unit corresponds to 25 hours of workload

### Student Assessment Methods

- Written Exam with Multiple Choice Questions
- Written Exam with Short Answer Questions
- Written Exam with Extended Answer Questions
- Written Assignment
- Report
- Oral Exams
- Laboratory Assignment

### Suggested Bibliography (Eudoxus and additional bibliography)

1. Γεωμορφολογία, Παπαπέτρου-Ζαμάνη, Υπ. Αγροτικής Ανάπτυξης & Τροφίμων, 2004, Αθήνα
2. Υδατικοί Πόροι: Εφαρμογές Τεχνικής Υδρολογίας, Τσακίρης Γεώργιος Βαγγέλης Χ., Συμμετρία, 1995, Αθήνα