MODULE DESCRIPTION

General

School	Geotechnical Sciences
Department	Forest and Natural Environment Sciences

Module Information

Title	Watershed Management
Course Code	C.Y.1
Level of Studies	Bachelors
Teaching Period	3rd 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	2nd	3rd	5

Faculty Instructor

_____ George Zaimes – Assistant Professor / Dimitrios Emmanouloudis – 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	☑	☑
English	☑	☑

Erasmus

- [x] The course is offered to exchange programme students

Learning Outcomes

The course teaches the basic methods for the proper management of surface waters in Greece.
The aim of the course is to understand the hydrological processes and to learn the basic concepts on surface waters, the hydrological cycle and their proper management at the watershed scale.
Upon successful completion of the course the student will be able to:

- Understand the hydrological cycle
- Manage sustainable surface water
- Recognize the boundaries of watersheds and understand their importance
- Manage sustainably river and torrent watersheds

List of General Competences

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

Module Content (Syllabus)

Hydrological processes implemented at watershed level including precipitation, infiltration, surface runoff, drought indices, water quality and water balance. Delineating the boundaries of the watershed area. Emphasis is placed on being aware of the impact of changing environmental factors and anthropogenic effects on river watershed management, urban development and climate change.

Keywords: Watershed, Hydrological Cycle, Surface Water, Technical Hydrology, Water Management

Educational Material Types

- [x] Book
- [x] Notes
- [x] Slide presentations
- [ ] Video lectures
- [x] Multimedia
- [x] Interactive exercises
- [ ] Other:

Use of Information and Communication Technologies

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

Module Organization

Please fill in the workload of each course activity

Course Activity	Workload (hours)
Lectures	32
Laboratory work	20
Field Trip/Short Individual Assignments	39
Independent Study	34
Total	**125**

* 1 ECTS unit corresponds to 25 hours of workload

Student Assessment Methods

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

Suggested Bibliography (Eudoxus and additional bibliography)

1. Τεχνική Υδρολογία Επιφανειακών Υδάτων, Παπαμιχαήλ Δημήτριος, Σ.Γιαχούδη & Σια Ο.Ε., 2001, Θεσ/νίκη

2. Υδατικοί Πόροι Τεχνική Υδρολογία, Γ. Τσακίρη, Συμμετρία, 1996, Αθήνα