MODULE DESCRIPTION

General

School	Geotechnical Sciences
Department	Forest and Natural Environment Sciences

Module Information

Title	Applied Informatics
Course Code	OPT.23
Level of Studies	Undergraduate
Teaching Period	Fall semester (7^{th})
Attendance Type	Optional course
Prerequisites	None

Orientation	Weekly Hours		Year	Semester	ECTS
	Lectures	Laboratory work			
	2	1	4^{th}	Fall	3

Faculty Instructor

Athanasios STYLIADIS

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

☑ The course is offered to exchange programme students

Learning Outcomes

• Familiarization of students with the basic theoretical principles of positioning systems (GPS), land information systems and management (LIS), and digital cadastre with emphasis on the forest cadastre.

• Familiarity of students with the technology of digital image processing.

• Exploration and evaluation of applied computer applications (GPS, LIS, digital Cadastre, Image Processing) in the sciences of Forest and Natural Environment.

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)

• Basic theoretical principles and algorithms of global-positioning systems (GPS).

• Introduction to Land Information Systems (LIS).

• The modern Greek digital cadastre - Emphasis on the forest cadastre.

• Familiarity of students with the digital image processing technology.

• Research and evaluation of applied computer applications (GPS, LIS, digital Cadastre, Image Processing) to the Forest and Natural Environment sciences.

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	10
Laboratory work	10
Field Trip/Short Individual Assignments	20
Independent Study	35
Total	75

* 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)

Athanasios D. Styliadis, «Geographical Information Systems – Spatial Reasoning & Geomatics Engineering», Ziti Publications, Thessaloniki, ISBN: 960-431-882-9, Eudoxus code: 10945.

Athanasios D. Styliadis, «Programming the User Interface in Human-Computer Interaction – A Computing GIS Perspective», Ziti Publications, Thessaloniki, ISBN: 960-431-768-7, Eudoxus code: 10971.

Athanasios D. Styliadis, «Computer Graphics», Ziti Publications, ISBN: 960-431-510-2, Eudoxus code: 11193.