COURSE OUTLINE

(1) General

School:	Social Sciences		
Academic Unit:	Geography		
Level of studies	Undergraduate		
Course Code:	GEO 342	Semester:	E
Course Title:	Introduction to Remote Sensing		
Independent Teaching Activities		Weekly Teaching Hours	Credits
Lecture		2	
Laboratory practice		2	
		Course total	5
Course Type:	Required Elective		
Prerequisite Courses:	None		
Language of Instruction and Examinations	Greek		
Is the course offered to Erasmus students:	No		
Course Website (Url):	https://geography.aegean.gr/pps/index_en.php?content=0&lesson=342		

(2) Learning Outcomes

Learning Outcomes

This course aims to introduce students to basic principles of Remote Sensing and image analysis. Expected learning outcomes include:

- Gain in depth understanding of theoretical issues in Remote Sensing
- Acquire expertise in the use of various open source Remote Sensing software.
- Take the right decisions regarding the path of analysis for various spatial issues

General Competences

1. Search for, analysis and synthesis of data and information, with the use of the necessary technology
2. Working independently
3. Project planning and management
4. Production of free, creative and inductive thinking

(3) Syllabus

This course aims to introduce students to basic principles of Remote Sensing and image analysis.

Principles of Remote Sensing, Satellite and airborne sensors, Qualitative and quantitative analysis of Aerial photographs, Radiometric and geometric enhancement of digital images, Image Algebra, Vegetation Indices, Multispectral classification of satellite imagery and Assessment of Classification Accuracy. Satellite imagery includes (depending on the exercise) Landsat TM/ETM/OLI, SPOT, AVHRR, MODIS.

(4) Teaching and Learning Methods - Evaluation

Delivery:	face-to-face
Use of Information and Communication Technology:	Use of PC and specialised software (GRASS GIS, SNAP tools, QGIS, ILWIS) for lab exersises.
Teaching Methods:	

Activity	Semester workload
Lecture	26
Laboratory practice	26
Project	26
Non-supervised study	52
Performance evaluation/Exams	2
Course total	132

Student Performance Evaluation	Normal exam period: 60% written exam and 40% assignments. Resits: 100% written exam

(5) Attached Bibliography

1. Μερτίκας Σ., 2006. Τηλεπισκόπηση και Ψηφιακή Ανάλυση Εικόνας, Εκδόσεις Ίων, Αθήνα.
2. Καρτάλης Κ. και Φείδας Χ., 2006. Αρχές και Εφαρμογές Δορυφορικής Τηλεπισκόπησης, εκδόσεις Γκιούρδας, Αθήνα.
3. Lillesand, T. M. and Kiefer, R. W., 1994. Remote Sensing and Image Interpretation. 3rd edition, Wiley, New York.
4. Mather, P., 2004. Computer Processing of Remotely-Sensed Images: An Introduction. 3rd edition, Wiley, Chichester.
5. Richards, J. A., 1993. Remote Sensing Digital Image Analysis: An Introduction. 2nd edition, Springer, Berlin.