

LABORATORY MODULE OUTLINE ATM1

1. GENERAL INFORMATION

SCHOOL	OF APPLIED ARTS AND SUSTAINABLE DESIGN		
PROGRAM COURSE	Documentation and modeling of Monuments and Archaeological Sites (ATM)		
LEVEL OF STUDY	POSTGRADUATE		
MODULE CODE	ATM1	SEMESTER OF STUDY	1st
MODULE TITLE	Spatial measurement and documentation methods		
INDEPENDENT TEACHING ACTIVITIES <i>in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits</i>		HOURS	CREDIS
Weekly teaching hours 19-20 hours x 13 weeks		250	10 ECTS
COURSE TYPE Compulsory, Optional, Optional mandatory	Compulsory		
PREREQUISITE MODULES:	None		
LANGUAGE OF INSTRUCTION AND EXAMS	Greek		
THE MODULE IS OFFERED TO ERASMUS STUDENTS	No		
MODULE WEBSITE (URL)	https://www.eap.gr/en/documentation-and-modeling-of-monuments-and-archaeological-sites-atm-thematics/#atm1 Each laboratory module has its own space in the Learning Management System of HOU (https://courses.eap.gr/login/index.php), with controlled access (use of code) for students and teaching staff.		

2. LEARNING OUTCOMES

Learning Outcomes <i>The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:</i>
Upon successful completion of the course module, students will be able to: • Implement imaging methods for the geometric documentation of monuments, archaeological sites and excavations. • Understand topographic surveying methods and the creation of three-dimensional models based on field measurements. • Embed the practicalities of field surveying with specialised surveying equipment. • Understand the optimum performance of the final product of surveying a monument in order to visualize it. • Know the function of Geographic Earth Information Systems (GIS) and their basic features. • Understand the methods of correlation between geographic and descriptive data of archaeological works. • Know the different ways of rendering through digital maps and interactive maps (Web- based GIS).

- Distinguish the specificities of each topographic problem and to choose the optimal mapping method.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,

Adapting to new situations

Decision-making

Individual/Independent work

Group/Team work

Working in an international environment

Working in an interdisciplinary environment (Other.....citizenship, spiritual freedom, social awareness, altruism etc.)

Project planning and management

Respect for diversity and multiculturalism

Environmental awareness

Social, professional and ethical responsibility and

sensitivity to gender issues

Critical thinking

Development of free, creative and inductive

- Search for, analysis and synthesis of data and information by the use of appropriate technologies,
- Decision-making
- Adapting to new situations
- Group/Team work
- Working in an international environment
- Project planning and management
- Respect for diversity and multiculturalism
- Environmental awareness
- Critical thinking
- Development of free, creative and inductive

3. MODULE CONTENT

The Laboratory Course Module " **Spatial measurement and documentation methods**" explains the concept of geometric documentation and mapping for monuments and archaeological sites. It presents the main categories of surveying, their methodologies and their content. It describes the method of surveying, explains the geometric data of the site and the fundamental problems of surveying, such as horizontal, vertical and tachymetric surveying. The Module teaches the basic features of Geographic Earth Information Systems (GIS) for data collection, management, analysis and visualization. Explains the concept of georeferencing in spatial data, as well as the integration of spatial and/or descriptive data to help implement spatial analysis. A description is given of spatial data formats and Georeferencing, as well as the basic models used to manage the data.

The objective of the Laboratory Course Module is to gain an understanding of the methods and techniques used for the geometric documentation of monuments and archaeological sites used for the restoration and conservation of monuments. Students can observe fieldwork with special surveying equipment and process the data in real time. They then gain knowledge of spatial data analysis and skills in the construction of thematic maps and their visualization.

4. TEACHING METHODS--ASSESSMENT

MODES OF DELIVERY <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i>	Distance education with 3 Group Counseling Meetings of 3 hours each (OSS)
---	---

	In Situ Laboratory exercises with topography equipment in one 4-hour session. Personal communication and feedback when needed (consulting role of tutors)														
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in teaching, Laboratory Education, Communication with students</i>	We use : Remote meetings tools (cisco webex), Presentation software (e.g. power point), Word processors (i.e. word) Spreadsheets (i.e. excel) Additionally, the students use office automation tools, web browsers and e-reader for digital books.														
MODULE DESIGN <i>Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc</i> <i>The study hours for each learning activity as well as the hours of selfdirected study are given following the principles of the ECTS.</i>	<table border="1"> <thead> <tr> <th><i>Activity</i></th><th><i>Annual Workload</i></th></tr> </thead> <tbody> <tr> <td>3 OSS (x 3 hours)</td><td>9</td></tr> <tr> <td>Live workshop</td><td>4</td></tr> <tr> <td>3 tutorial exercises (2 x 20 + 1 x 30 hours)</td><td>70</td></tr> <tr> <td>Final project</td><td>50</td></tr> <tr> <td>Individual study (9 hours x 13 weeks)</td><td>117</td></tr> <tr> <td>Total laboratory module workload (hours)</td><td>250</td></tr> </tbody> </table>	<i>Activity</i>	<i>Annual Workload</i>	3 OSS (x 3 hours)	9	Live workshop	4	3 tutorial exercises (2 x 20 + 1 x 30 hours)	70	Final project	50	Individual study (9 hours x 13 weeks)	117	Total laboratory module workload (hours)	250
<i>Activity</i>	<i>Annual Workload</i>														
3 OSS (x 3 hours)	9														
Live workshop	4														
3 tutorial exercises (2 x 20 + 1 x 30 hours)	70														
Final project	50														
Individual study (9 hours x 13 weeks)	117														
Total laboratory module workload (hours)	250														
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS <i>Detailed description of the evaluation procedures.</i> <i>Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other.....etc.</i> <i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students</i>	Completion of 3 written assignments during the academic semester with a weighting factor of 40% in determining the final grade of the module. Mandatory live laboratory activities constitute 20% of the grade. Final semester project accounts for 40%. For further information please visit the program's webpage														

5. SUGGESTED BIBLIOGRAPHY

- Ντίνης Ο. Θ. Τοπογραφικές Εφαρμογές. ISBN-13: 9789604561391, Εκδόσεις Ζήτη, 2009.
- Λαλάκης Κ., Υφαντής Ι., Δούκας Ι, Σαββαΐδης Π. Τοπογραφία και Χαρτογραφία. Για αρχιτέκτονες και αρχαιολόγους. ISBN 978-960-599-077-0
- Στεφανάκης Ε. Βάσεις Γεωγραφικών Δεδομένων και Συστήματα Γεωγραφικών Πληροφοριών. ISBN 9789607182722