COURSE OUTLINE

APPLICATIONS OF DIGITAL TECHNOLOGIES IN ARCHAEOLOGY

1. GENERAL

SCHOOL	CLASSICS AND HUMANITIES		
DEPARTMENT/UPS	HUMANITIES / PHILOLOGY, HISTORY AND ANTHROPOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE – LEVEL 6		
COURSE CODE	**XXXXX**	**SEMESTER**	3RD
COURSE TITLE	APPLICATIONS OF DIGITAL TECHNOLOGIES IN ARCHAEOLOGY		

TEACHING ACTIVITIES *If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.*	**TEACHING HOURS PER WEEK**	**ECTS CREDITS**
	3	5
Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.		

COURSE TYPE *Background, General Knowledge, Scientific Area, Skill Development*	SKILL DEVELOPMENT
PREREQUISITES:	NO
TEACHING & EXAMINATION LANGUAGE:	GREEK
COURSE OFFERED TO ERASMUS STUDENTS:	YES
COURSE URL:	https://eclass.duth.gr/courses/XXXXXX/

2. LEARNING OUTCOMES

Learning Outcomes

Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

Upon successful completion of the course, participants will be able to:

- Be aware of the possibilities of digital data recording provided by modern technology.
- Analyse data and extract information using databases.
- Understand the operational needs of an archaeological research and the usefulness of digital tools.
- Use digital image processing tools.
- Be able to handle three-dimensional graphics.
- Be familiar with 3D digitisation techniques.
- Select appropriate 3D digitisation techniques
- Be aware of the technologies for the visualisation and reproduction of three-dimensional models
- Be familiar with modern surveying methods
- Describe the functions and capabilities of a modern integrated geodetic station.
- Recognise the contribution of Geographical Information Systems to archaeological research.
- Handle orthophotographs and digital terrain models.

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,
ICT Use
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project design and management
Equity and Inclusion
Respect for the natural environment
Sustainability
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Critical thinking
Promoting free, creative and inductive reasoning

- Search, analysis and synthesis of data and information, ICT Use
- Autonomous work
- Teamwork
- Promoting free, creative and inductive reasoning
- Production of new research ideas
- Working in an interdisciplinary environment

3. COURSE CONTENT

The course is divided into 13 weeks, the content of which is as follows:

1. Introduction to the course and general description of modern digital tools used in archaeology
2. Digital image processing
3. Vector graphics
4. Three-dimensional computer graphics
5. Three-dimensional digitisation
6. Methods and organisation of 3D digitisation
7. Orthophotography and digital terrain models
8. Databases
9. Geographical information systems
10. Digital documentation tools for archaeological fieldwork
11. Digital documentation of archaeological material
12. Publication and dissemination of research data
13. Case studies

4. LEARNING & TEACHING METHODS - EVALUATION

<table>
<tr><td>TEACHING METHOD
Face to face, Distance learning, etc.</td><td>• Lectures
• Active learning (hands-on learning) - Experiential learning
• Collaborative learning</td></tr>
<tr><td>USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT)
Use of ICT in Teaching, in Laboratory Education, in Communication with students</td><td>• Digital assessment tools
• Online collaboration tools
• Use of ICT in teaching and communication with students
• PPT presentations
• Teaching material, announcements and communication through the eClass platform
• Communication with students via email</td></tr>
<tr><td>TEACHING ORGANIZATION
The ways and methods of teaching are described in detail.
Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.

The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</td><td><table><tr><th>Activity</th><th>Workload/semester</th></tr><tr><td>Lectures</td><td>39</td></tr><tr><td>Essay</td><td>60</td></tr><tr><td>Study and analysis of bibliography</td><td>49</td></tr><tr><td>Written examination</td><td>2</td></tr><tr><td>Total</td><td>150</td></tr></table></td></tr>
<tr><td>STUDENT EVALUATION
Description of the evaluation process

Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others

Please indicate all relevant information about</td><td>Essay (compulsory): 50%
Final written examination: 50%</td></tr>
</table>

the course assessment and how students are informed	

5. SUGGESTED BIBLIOGRAPHY

- Bartscherer, Thomas, Roderick Coover. Switching Codes: Thinking Through Digital Technology in the Humanities and the Arts. University of Chicago Press, 2011.
- Burdick, Anne, et al. Digital_Humanities. Mit Press, 2012.
- Nyhan Julianne, Melissa Terras, Edward Vanhoutte (επιμ.). Defining Digital Humanities. Ashgate, 2013.
- Ramakrishnan, R., & Gehrke, J. Συστήματα διαχείρισης βάσεων δεδομένων. Εκδόσεις Τζιόλα, Αθήνα 2016.
- Schreibman, Susan, Ray Siemens, and John Unsworth, eds. A companion to digital humanities. John Wiley & Sons, 2008.
- Thompson Klein, Julie. Interdisciplining Digital Humanities: Boundary Work in an Emerging Field. Ann Arbor. University of Michigan Press, 2014.
- Warwick, Claire, Melissa Terras, and Julianne Nyhan, eds. Digital humanities in practice. Facet Publishing, 2012.
- Κουτσούδης Ανέστης, Γεώργιος Παυλίδης. 3Δ Ψηφιοποίηση. Εκδόσεις Τσότρας, 2019.
- Λυριτζής Ιωάννης (επιμ.). Νέες τεχνολογίες στις αρχαιογνωστικές επιστήμες. Εκδόσεις Δάρδανος, 2008.
- Παπαμάρκος Νικόλαος. Ψηφιακή Επεξεργασία Εικόνας. Εκδόσεις: Παπαμάρκου, Ξάνθη 2017.
- Χατζόπουλος Ιωάννης, Ναυσικά Χατζοπούλου. Γεωχωροπληροφορική τοπογραφία. Εκδόσεις Τζιόλα, Αθήνα 2020.

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	XXXXXXXX
Contact details:	XXXXXXXX
Supervisors: (1)	YES
Evaluation methods: (2)	Essay (compulsory): 50% Final written examination: 50%
Implementation Instructions: (3)	The written exams will be conducted via the eClass platform on a date and time that will be announced in advance. Students will be informed of the exam duration and content well ahead of the scheduled exam. The assignment must be submitted through eClass by a specified deadline.

(1) Please write YES or NO

(2) Note down the evaluation methods used by the teacher, e.g.

- *written assignment* or/and exercises
- written or oral examination with distance learning methods, provided that the integrity and reliability of the examination are ensured.

(3) In the **Implementation Instructions** section, the teacher notes down clear instructions to the students:

a) in case of **written assignment and / or exercises:** the deadline (e.g. the last week of the semester), the means of submission, the grading system, the grade percentage of the assignment in the final grade and any other necessary information.
b) in case of **oral examination with distance learning methods:** the instructions for conducting the examination (e.g. in groups of X people), the way of administration of the questions to be answered, the distance learning platforms to be used, the technical means for the implementation of the examination (microphone, camera, word processor, internet connection, communication platform), the hyperlinks for the examination, the duration of the exam, the grading system, the percentage of the oral exam in the final grade, the ways in which the inviolability and reliability of the exam are ensured and any other necessary information.
c) in case of **written examination with distance learning methods**: the way of administration of the questions to be answered, the way of submitting the answers, the duration of the exam, the grading system, the percentage of the written exam of the exam in the final grade, the ways in which the integrity and reliability of the exam are ensured and any other necessary information.
There should be an attached list with the Student Registration Numbers only of students eligible to participate in the examination.