COURSE OUTLINE

PROGRAMMING FOR APPLICATIONS IN ARTS AND CULTURE

1. GENERAL

SCHOOL	CLASSICS AND HUMANITIES
DEPARTMENT/UPS	HUMANITIES / DIGITAL APPLICATIONS IN ARTS AND CULTURE
LEVEL OF STUDIES	UNDERGRADUATE – LEVEL 6
COURSE CODE	XXXXX **SEMESTER** 2ND
COURSE TITLE	PROGRAMMING FOR APPLICATIONS IN ARTS AND CULTURE

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	6
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*	BACKGROUND
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:
- Recognise the advantages of using object-oriented programming to manage complex systems and cultural data.
- Understand and apply the principles of object-oriented programming to develop applications in the arts and culture sector.
- Effectively utilise the potential of object-oriented programming for managing complex systems and cultural data.
- Design and implement classes, objects, and inheritance structures to write modular, reusable code suitable for applications in the cultural domain.
- Manipulate files for storing and retrieving cultural data in object-oriented programming-based applications.
- Develop interactive applications that integrate multimedia cultural content using object-oriented programming methods.
- Apply design patterns and best practices in object-oriented programming to enhance the structure and efficiency of cultural applications.
- Collaborate in writing code, using version control systems, and following workflows for software development.
- Employ application testing and debugging techniques in object-oriented programming to ensure software reliability.

General Skills
Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information, ICT Use	*Project design and management*
	Equity and Inclusion
Adaptation to new situations	*Respect for the natural environment*
Decision making	*Sustainability*

- 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

1. Introduction to Object-Oriented Programming: Transitioning from structured to object-oriented programming
2. Classes and Objects: The foundational building blocks of object-oriented programming
3. Basic Concepts: Encapsulation and data management
4. Basic Concepts: Inheritance and polymorphism
5. Basic Concepts: Abstract classes and interfaces
6. I/O Streams and File Handling
7. Interfacing with Cultural Databases
8. Collaborative Coding: Version control systems
9. Event-Based Programming and Graphical User Interfaces
10. Integration of Third-Party Libraries and Application Programming Interfaces (APIs)
11. Testing and Debugging
12. Software Design Standards
13. The Software Life Cycle

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	• Lectures • Active learning (hands-on learning) - Experiential learning • Collaborative learning
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	• 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

TEACHING ORGANIZATION	Activity	Workload/semester
The ways and methods of teaching are described in detail.	Lectures	26
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.	Laboratory Exercise	13
	Essay	37
	Projects	46
	Study and analysis of bibliography	55
The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.	Written examination	3
	Total	180

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,*	Formative Essay (compulsory): 50% Final written examination: 50%

Clinical examination of a patient, Artistic interpretation, Other/Others *Please indicate all relevant information about the course assessment and how students are informed*	2

5. SUGGESTED BIBLIOGRAPHY

- Taher, R. (2019). Hands-On Object-Oriented Programming with C#: Build maintainable software with reusable code using C. Packt Publishing Ltd.
- Schildt, H. (2009). Οδηγός της C# 3.0. Εκδόσεις Μ. Γκιούρδας
- Μαγκούτης, Κ., & Νικολάου, Χ. (2015). Εισαγωγή στον Αντικειμενοστραφή Προγραμματισμό με Python [Προπτυχιακό εγχειρίδιο]. Κάλλιπος, Ανοικτές Ακαδημαϊκές Εκδόσεις. https://dx.doi.org/10.57713/kallipos-829

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.