1. **GENERAL**

SCHOOL	ENGINEERING
DEPARTMENT	PRODUCT AND SYSTEMS DESIGN ENGINEERING
LEVEL OF STUDIES	UNDER GRADUATE
COURSE CODE	5102
COURSE TITLE	DIGITAL GAMES AND GAME BASED LEARNING

COURSE CODE 5102	**SEMESTER**	9th

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	**3**	**6**
Laboratory		
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		
COURSE TYPE *general background, special background, specialised general knowledge, skills development*	*specialised general knowledge*	
PREREQUISITE COURSES:	NONE	
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK/ENGLISH	
COURSE DELIVERED TO ERASMUS STUDENTS	YES	
MODULE WEB PAGE (URL)	https://eclass.uowm.gr/courses/MRE218	

2. **LEARNING OUTCOMES**

Learning outcomes
Electronic (digital) videogames have played an integral part of modern culture for over four decades. They provide their user with fun, active employment, motivation and interaction, adapt and create winning situations increasing the confidence of the players. A special category is educational games where by integrating educational content and purpose, learning can be achieved in a more relaxed environment. The aim of this course is to present topics related to the design and development of digital games as well as the relevant technologies. Also, to present elements of the educational approach and methodology that should be followed.   Upon successful completion of the course, students should be able to: ● describe the basic design principles of Digital Games   ● describe the important design elements of the videogames such as interface, technology and plot.   ● apply digital game design, development and evaluation methodologies   ● evaluate a digital game   ● plan in detail the interface, the story and the plot of a digital game

- design a digital game with specific educational objectives
- develop functional digital game prototypes in modern development environments.

General Skills
Theoretical and practical background set in educational purpose digital game design

3. COURSE CONTENTS

- History of digital games and major milestones in their evolution
- Stages of designing and developing a digital game
- Digital game player profile
- Social issues (violence, addiction)
- Uses in education, educational theories and approaches
- Basic principles and good practices of video game design
- Organization, management, and specializations of a development team
- Software technologies and tools used to write game code
- Process and tools for developing video game content

4. TEACHING METHODS - ASSESSMENT

MODE OFDELIVERY	1. THEORY In class, face to face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	- Use of appropriate software - Video and slide presentations - Support of teaching process via the electronic platform e-class
TEACHING METHODS	

Activity	Semester workload
Lectures	50
Projects	50
Non-directed study	50
Course total	**150**

ASSESSMENT METHODS	1. (60%) Final written exam which includes:
	   i. Short-answer questions
	   ii. Multiple choice questions
	   iii. Problem solving
	
	2. (40%) Homework

5. ATTACHED

- **Αναγνώστου, Κ. (2009): Βιντεοπαιχνιδια: Βιομηχανία και Ανάπτυξη. Κλειδάριθμος.**

- **Prensky, M. (2009): Μάθηση βασισμένη στο ψηφιακό παιχνίδι. Μεταίχμιο.**
- **Eng, Lee Zhi (2015): Building a game with Unity and Blender, Packt**