

DEREE COLLEGE SYLLABUS FOR:

ITC 4445 GAMES PORTFOLIO

(Previously ITC 4345 Games Portfolio Project)
(Updated Fall 2021)

US CR: 3/0/3
UK LEVEL: 6
UK CREDITS: 15

PREREQUISITES:	ITC 2088 Introduction to Programming <i>and</i> ITC 2197 Object Oriented Programming Techniques OR ITC 2053 Introduction to Game Programming ITC 3051 User Experience and Interaction Design <i>or</i> ITC 4035 Game Design ITC 3237 Game Development				
COREQUISITES:	None.				
CATALOG DESCRIPTION:	Application of game design and development skills on small-scale games using a variety of tools; game engines; game programming; game design; planning and managing a portfolio of games.				
RATIONALE:	This course is an opportunity for students to apply theoretical knowledge and practical skills through the development of a portfolio of small-scale games.				
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Utilize appropriate software tools to design and develop games. 2. Produce media content for game development. 3. Integrate game-related media content. 4. Plan and effectively manage the game development process.				
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: <ul style="list-style-type: none">• Classroom lectures and occasional laboratory practical sessions.• Office hours held by the instructor to provide further assistance to students.• Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.				
ASSESSMENT:	Summative: <table border="1"><tr><td>Final assessment: Portfolio of small-scale games</td><td>100%</td></tr></table> Formative: <table border="1"><tr><td>Home and in-class exercises.</td><td>0%</td></tr></table> <p>The formative assessment aims and prepare students for the summative assessment and expose them to teamwork. The final summative assessment tests LOs 1, 2, 3, 4. <i>Students are required to resit failed assessments in this module.</i></p>	Final assessment: Portfolio of small-scale games	100%	Home and in-class exercises.	0%
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Home and in-class exercises.	0%				

<p>INDICATIVE READING:</p>	<p>REQUIRED MATERIAL:</p> <ol style="list-style-type: none"> 1. Instructor’s notes and Blackboard material. <p>RECOMMENDED READING:</p> <ol style="list-style-type: none"> 1. Dunn, F. & Parberry, I. (2011). 3D math primer for graphics and game development (2nd ed.). Boca Raton, FL: A K Peters/CRC Press. 2. Eberly, D. (2010). Game physics (2nd ed.). Amsterdam: Morgan Kaufmann. 3. Gregory, J. (2009), Game Engine Architecture, A K Peters/CRC Press. 4. Hocking, J. (2015). Unity in Action: Multiplatform Game Development in C#. Shelter Island, NY: Manning. 5. Lake, A. (2010), Game programming Gems, Cengage Learning 6. Lengyel, E. (2011), Mathematics for 3D Game Programming and Computer Graphics, 3rd Edition, Cengage Learning 7. Rabin, S. (ed.) (2015). Game AI Pro²: Collected Wisdom of Game AI Professionals. Boca Raton, FL: CRC Press.
<p>INDICATIVE MATERIAL: <i>(e.g. audiovisual, digital material, etc.)</i></p>	<p>REQUIRED MATERIAL: N/A</p> <p>RECOMMENDED MATERIAL: Unity Engine: http://www.unity3d.com Unreal Engine: http://www.unrealengine.com CRYENGINE: http://www.cryengine.com</p>
<p>COMMUNICATION REQUIREMENTS:</p>	<p>Daily access to the course’s site on the College’s Blackboard CMS. Use of word processing and/or presentation graphics software for documentation of assignments</p>
<p>SOFTWARE REQUIREMENTS:</p>	<p>Blender 3DS Max Adobe Creative Suite Game engine(s) – latest editions:</p> <ul style="list-style-type: none"> • Unity • Unreal • CryEngine
<p>WWW RESOURCES:</p>	<p>Hellenic Gamers Association: http://www.hgda.gr/ Game Programming : http://www-cs-students.stanford.edu/~amitp/gameprog.html Art assets for game programming: http://letsmakegames.org/resources/art-assets-for-game-developers http://www.blender-models.com Game Development Stack Exchange: http://gamedev.stackexchange.com Game developer net http://www.gamedev.net/page/index.html Artificial Intelligence for Game Programming: http://www.gameai.com Steering behaviour for characters: http://red3d.com/cwr/steer Gamasutra: news, ideas: http://www.gamasutra.com</p>

	<p>Unity game engine: https://unity3d.com/ Unreal game engine: http://www.unrealengine.com Cry game engine: http://cryengine.com/ Game Programming Patterns (by Robert Nystrom) http://gameprogrammingpatterns.com</p>
INDICATIVE CONTENT:	<ol style="list-style-type: none">1. Overview of game design2. Multimedia content creation3. Game engines and content integration4. Concepts in game programming5. Managing the game development process