

DEREE COLLEGE SYLLABUS FOR:						
ITC 4445 GAMES PORTFOLIO (Previously ITC 4345 Games Portfolio Project) (Updated Fall 2025)		3/0/3 UK LEVEL: 6 UK CREDITS: 15				
PREREQUISITES:	ITC 2088 Introduction to Programming <i>and</i> ITC 2197 Object Oriented Programming Techniques <u>OR</u> ITC 2053 Introduction to Game Programming ITC 3051 User Experience and Interaction Design <i>or</i> ITC 4035 Game Design ITC 3137 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: • Classroom lectures, occasional laboratory practical sessions, and use of generative AI tools to inform course content • 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:	<div>Summative:<table><tr><td>Final assessment: Portfolio of small-scale games</td><td>100%</td></tr></table></div> <div>Formative:<table><tr><td>Home and in-class exercises.</td><td>0%</td></tr></table></div> <div>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></div>		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: (e.g. audiovisual, digital material, etc.)</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/</p> <p>Unreal game engine: http://www.unrealengine.com</p> <p>Cry game engine: http://cryengine.com/</p> <p>Game Programming Patterns (by Robert Nystrom) http://gameprogrammingpatterns.com</p>
INDICATIVE CONTENT:	<ol style="list-style-type: none"> 1. Overview of game design 2. Multimedia content creation 3. Game engines and content integration 4. Concepts in game programming 5. Managing the game development process