

**DEREE COLLEGE SYLLABUS FOR:
ITC 4345 GAMES PORTFOLIO PROJECT**

3/0/3

(New course Fall 2018)

PREREQUISITES:	ITC 1070 Information Technology Fundamentals <i>or equivalent</i> ITC 2153 Introduction to Game Development					
COREQUISITES:	ITC 4135 Game Design					
CATALOG DESCRIPTION:	Application of game design and development skills on small-scale games using a variety of tools; game engines; game development; 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:	<p>As a result of taking this course, the student should be able to:</p> <ol style="list-style-type: none"> 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:	<p>In congruence with the teaching and learning strategy of the college, the following tools are used:</p> <ul style="list-style-type: none"> • Classes consist of lectures and class discussions, enriched with hands-on experience. • 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:	<p>Summative:</p> <table border="1" style="width: 100%;"> <tr> <td>Project: Design and develop a portfolio of small-scale games.</td> <td style="text-align: center;">100%</td> </tr> </table> <p>Formative:</p> <table border="1" style="width: 100%;"> <tr> <td>In class exercises</td> <td style="text-align: center;">0</td> </tr> </table> <p>The formative assessments aim to shape teaching along the semester and prepare students for the summative assessment. The project tests learning outcomes 1, 2, 3, 4.</p>		Project: Design and develop a portfolio of small-scale games.	100%	In class exercises	0
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In class exercises	0					

	(Assignment instructions and assessment rubrics are distributed on the first day of class with the Course Outline.)
INDICATIVE READING:	<p>REQUIRED READING:</p> <p>Blackboard materials.</p> <p>RECOMMENDED READING:</p> <p>Dunn, F. & Parberry, I. (2011). <i>3D math primer for graphics and game development</i> (2nd ed.). Boca Raton, FL: A K Peters/CRC Press.</p> <p>Eberly, D. (2010). <i>Game physics</i> (2nd ed.). Amsterdam: Morgan Kaufmann.</p> <p>Gregory, J. (2009), <i>Game Engine Architecture</i>, A K Peters/CRC Press.</p> <p>Hocking, J. (2015). <i>Unity in Action: Multiplatform Game Development in C#</i>. Shelter Island, NY: Manning.</p> <p>Lake, A. (2010), <i>Game programming Gems</i>, Cengage Learning</p> <p>Lengyel, E. (2011), <i>Mathematics for 3D Game Programming and Computer Graphics</i>, 3rd Edition, Cengage Learning</p> <p>Rabin, S. (ed.) (2015). <i>Game AI Pro²: Collected Wisdom of Game AI Professionals</i>. Boca Raton, FL: CRC Press.</p>
INDICATIVE MATERIAL: (e.g. audiovisual, digital material, etc.)	<p>Unity Engine: http://www.unity3d.com</p> <p>Unreal Engine: http://www.unrealengine.com</p> <p>CRYENGINE: http://www.cryengine.com</p>
COMMUNICATION REQUIREMENTS:	<p>Regular access to the course's site on the College's Blackboard CMS.</p> <p>Use of word processing and/or presentation graphics software for documentation of assignments.</p>
SOFTWARE REQUIREMENTS:	<p>Game engine(s) – latest editions:</p> <ul style="list-style-type: none"> • Unity • Unreal • CryEngine <p>Software for content production (e.g. 3D modelling, image processing, etc.)</p> <ul style="list-style-type: none"> • Blender • 3DS Max • Adobe Creative Suite
WWW RESOURCES:	Hellenic Gamers Association: http://www.hgda.gr/

	<p>Game Programming : http://www-cs-students.stanford.edu/~amitp/gameprog.html</p> <p>Art assets for game programming: http://letsmakegames.org/resources/art-assets-for-game-developers http://www.blender-models.com</p> <p>Game Development Stack Exchange: http://gamedev.stackexchange.com</p> <p>Game developer net http://www.gamedev.net/page/index.html</p> <p>Artificial Intelligence for Game Programming: http://www.gameai.com</p> <p>Steering behaviour for characters: http://red3d.com/cwr/steer/ /</p> <p>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. Concepts in game design 2. Multimedia content creation 3. Game engines and content integration 4. Concepts in game programming 5. Managing the game development process