

4/29/2024 DATE



REQUIRED COURSE



ELECTIVE COURSE

Business DIVISION



NEW COURSE



REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	CIS-062	TITLE: (30 Characters Max)		Computer Game Development							
SEM CR HRS:	3	Lecture:	2	Lab:	2	ECH:	4				
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Baccalaureate /Non-IAI		<input checked="" type="checkbox"/> Career/Technical <input type="checkbox"/> Dev Ed/ Not in Degree Audit		Clinical Practicum:	0	Work-based Learning	0	WBL ECH:	0	
COURSE PCS #	12 - 11. 0201		IAI Code				Contact Hours Per Week				
Repeatable (Y/N):	Y	Pass/Fail (Y/N):	N	Variable Credit (Y/N):	N	Min:	Max:	16 Wks	200	8 Wks	400
Prerequisites:	CIS-156										
Corequisites:											
Catalog Description: (40 Word Limit)	A practical exploration of video game development using both original programming and modification of existing game code. A variety of game types will be explored and created with the focus being on understanding, exploration and creativity in the development process.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Overview of game types and game programming	2			
Game programming basics	3	5		
Graphics, sound, user input and file access	4	4		
3D graphics development	5	5		
Multiuser game creation	4	4		
Game engine fundamentals	3			
Level design and development	4	5		
Configuring options and communication	3	4		
Troubleshooting and finalizing games	2	3		
TOTAL	30	30	0	0

EVALUATION			
QUIZZES	<input checked="" type="checkbox"/>	EXAMS	<input checked="" type="checkbox"/>
LAB WORK	<input checked="" type="checkbox"/>	PROJECTS	<input checked="" type="checkbox"/>
		ORAL PRES	<input type="checkbox"/>
		COMP FINAL	<input checked="" type="checkbox"/>
		PAPERS	<input type="checkbox"/>
		OTHER	<input type="checkbox"/>

COURSE MATERIALS	
TITLE:	Unity from Zero to Proficiency (Beginner): A Step-by-step Guide to Coding Your First Game
AUTHOR:	Patrick Felicia
PUBLISHER:	Independently Published
VOLUME/EDITION/URL:	ISBN-10: 1091872023
COPYRIGHT DATE:	2019

TITLE:	Level Up! – Guide to Great Video Game Design
AUTHOR:	Rogers
PUBLISHER:	Wiley
VOLUME/EDITION/URL:	
COPYRIGHT DATE:	2010

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Overview of game types and game programming	2	Identify different types of games and the differing approaches to programming them.
Game programming basics	3	Explore the command set available. A. Variables and Data Types B. Looping Commands
Lab Exercises	5	Create programs using each of the fundamental commands.
Graphics, sound, user input and file access	4	Discuss the implementation of additional functions.
Lab Exercises	4	Create programs using each of the additional functions available.
3D graphics development	5	Explore the 3D gaming environment and the tools and techniques necessary for successful deployment.

Lab Exercises	5	Create different 3D environments and integrate them into a variety of games.
Multiuser game creation	4	Discuss differences between single and multiuser gaming and explore coding requirements for success.
Lab Exercises	4	Convert single-player games to multiplayer and develop code from scratch that allows for multiplayer interaction.
Game engine fundamentals	3	Explore the options available when using and developing for a gaming engine.
Level design and development	4	Explore how to create levels using a level editor and explore the options available and the impact on gameplay.
Lab Exercises	5	Create multiple levels and test them for playability.
Configuring options and communication	3	Discuss the considerable options for player and bot configuration and the interaction between clients and servers.
Lab Exercises	4	Modify the configuration to allow for more sophisticated game play and machine interaction.
Troubleshooting and finalizing games	2	Discuss the options for reviewing code, error-correcting game sequences and outputting compiled games.
Lab Exercises	3	Create executables from final, debugged code.
60		

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:
	<ul style="list-style-type: none"> • Explain the history of computer gaming.
	<ul style="list-style-type: none"> • Create a functional text-based game.
	<ul style="list-style-type: none"> • Create a functional graphical game.

* Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.