Oakland University
School of Engineering and Computer Science
Department of Computer Science and Engineering

CSI 1220: Computer Animation (4 Credits)
Section 14763
Winter 2018

Instructor: Mary Schmotzer
Office: EC 525
Office Hours: By appointment only. Please contact me through email to make an appointment.
Email: schmotze@oakland.edu
Class Time/Location: Monday/Wednesday/Friday from 9:20 – 10:27 am in EC 550

Updated Course Description:
Computer animation is an increasingly critical component of human-computer interaction, computer games, movie industry, and scientific and engineering visualization. This course introduces the fundamental concepts of animation via game programming. Simple 2D computer games will be developed using the Game Maker programming language. Basic scripting concepts will also be introduced. This course is programming intensive. Offered fall, winter. *Satisfies the university general education requirement in the formal reasoning knowledge foundation area*.

General Education Learning Outcomes:
F.2. Formal Reasoning
The formal reasoning area prepares students to demonstrate:
- Knowledge of one or more formal reasoning systems such as computer programming, mathematics, statistics, linguistics, or logic
- Application of formal reasoning to read, understand, model, and solve problems across a variety of applications

Course Objectives:
By the end of this course the successful student will:
- Understand the concepts and practices of good computer game design.
- Know how to formulate a computer game, analyze it, develop a solution, implement it and test it.
- Be familiar with the Game Maker, or similar, game programming language.
- Understand how scripting is used in the implementation computer games.

Course Prerequisites: None

Required Textbook:

> Getting Started with Game Maker, Jerry Lee Ford, Jr., Course Technology, 2010
> ISBN-10: 1-59863-882-3   ISBN-13: 978-1-59863-882-0

Web Homepage:
A session specific website is located at https://moodle.oakland.edu/moodle. This website will include notes and schedules (including quiz dates) for our course. Projects will be available for download from this site. Projects should be submitted using moodle. Please check this site often for updates.

Computer Labs:
The fifth floor Engineering Center computer lab (EC 550) is available for lecture and labs. Our lecture in lab and practice labs will be held in this room.   You will also need a computer account to log into a computer. Please visit https://www.oakland.edu/secs/student-resources/technology-offices/ and click on the link to request an account.

Grading:

- Programming Projects: There will be approximately six *Programming Projects* assigned during the semester. These projects will consist of various Game Maker Applications. Programming Projects are to be completed in groups of two or three members. **(30%)** Note**:** Any late Programming Project submissions will be penalized 10% with none being accepted after one week of due date**.**
- Quizzes: There will be two *Quizzes* given during the semester. These quizzes will consist of either true/false or multiple choice questions. Quizzes are closed book/notes, however one 8 ½ by 11 inch sheet of notes will be allowed to use as a resource during the quizzes. Students must bring Scantron (**red form F-1712-PAR-L**) with them to all quizzes. *No make-up quizzes are given except in cases of documented emergencies*. **(20%)**
- Class Participation: Class attendance is **mandatory**. Students are expected to participate in class discussions and in class labs and/or work on programming projects. Students must be present (sign in), actively participating in that class day activity and/or submit their lab to moodle before the end of class or demonstrate their lab game to receive full credit. **(20%)**
- Final Project: The course will culminate with a Final Project which will be completely designed and implemented by each Programming Team. Each team member must complete a peer review to obtain final project peer review points. **(30%)**

    Grade points can be approximated based on the following formula
        Grade = (percentage score/16) – 2
        For example, 78% Grade = (78/16) – 2 = 2.9

Academic Conduct Policy:
Cheating on examinations, plagiarism, falsifying reports/records, and unauthorized collaboration, access, or modifying of computer programs is considered serious breaches of academic conduct. The Oakland University policy on academic conduct will be strictly followed with no exceptions. See the undergraduate catalog under Academic Policies and Procedures for more information. Students found guilty of academic misconduct by the Academic Conduct Committee will be given a 0.0 in the course.

Students with disabilities are to provide documentation from the Office of Disabilities Support Services prior to any accommodation.

Tentative Class Schedule (Subject to change as the semester proceeds.): REVISED March 13, 2018

Week Of	Topics	Reading Assignment	Project Due
January 3, 2018	Course Introduction	Posted Materials	
	Designing Games	Game Maker Tutorial 1	
	Introduction To Game Maker	Chapter 1	
	Getting Comfortable with the	Chapter 2	
	Game Maker IDE		
January 10, 2018	A Big Picture Overview of	Chapter 3	Example Project (1/10/18)
	How Things Work		
	Lab 2: Catch The Clown	Game Tutorial 2	
January 17, 2018	Lab 3: Super Pong	Chapter 4	
	Lab 4: Skybuster	Chapter 5	Project 1 (1/19/18)
January 24, 2018	Skybuster (continued)	Chapter 5	
			Project 2 (1/26/18)
January 31, 2018	Lab 5: Tank Battle	Chapter 6	
February 7, 2018	Tank Battle (continued)	Chapter 6	
			Project 3 (2/9/18)
February 14, 2018	Maze and Platform Games /Review for Quiz 1	Game Maker Tutorials 4 & 5	
February 16, 2018	Quiz 1		
February 19, 2018	Winter Break – No Class		
February 26, 2018	Alien Attack	Chapter 7	Project 4 (3/2/18)
March 5, 2017	Alien Attack (continued)	Chapter 7	
			Project 5 (3/9/18)
March 12, 2017	Lab 6 – GML Basics	Chapter 8	
	Lab 7: GML Decisions	Chapter 9	
March 19, 2017	Lab 8: GML Scripting – Part 2	Chapter 10	
	Arachnid Attack (continued)	Chapter 11	Project 6 (3/23/18)
March 26, 2018	Arachnid Attack (continued)	Chapter 10	Final Project
March 28, 2018	Review for Quiz 2		Preliminary Design
			(3/28/18)
March 30, 2018	Quiz 2		
April 2, 2017	Work on Final Project		Project 7 (4/2/18)
April 9, 2017	Work on Final Project		
April 16, 2017	Work on Final Project		Final Project
			(4/16/18)