



Class Information

Room	CSC 1-67	eClass	Moodle via ualberta.ca
Tuesdays	Lecture 5:00 – 800 pm	Thursdays	Lab 5:00 – 800 pm

Instructors

Instructor	Dr. Mike Carbonaro	TA	Corbett Artym
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Office Hours	By Appointment		

Course Description

One of the many *buzz words* in education right now, is *constructivism*: basically, the idea that students can build their own knowledge through experience... but what do they need to experience, and what knowledge are they building by doing so? Moreover, how does a teacher set-up a classroom for experience? What tools can they use, and what assignments result? How does one assess students in a constructionist classroom?

This course will emphasize students as builders of knowledge by having them build video games, as opposed to playing them. By doing so, we will address and explore the complexities of the pedagogy of using video games to teach K-12 students. Our lectures will focus on the psychological theory of constructivism, social constructivism, and constructionist frame works and their relevance to current learners and their different perspectives of technology use. Our labs will allow students to participate in two constructionist style activities where they will learn how to use a game building tool and then create their own video game from scratch. Finally our assignments will bring this all together by asking students to reflect on what they have *learned* from the *experience*, as well as how it relates to the psychological theories they have been exposed to.

Learning Objectives

By the end of this course, students will be able to:

- Create an interactive piece of software with a video game building tool.
- Compare and contrast learning theories, applying them to the field of educational technology.
- Apply a learning theory and/or an educational technology to a field of study they are involved in.
- Actively participate and guide discussions revolving around educational technology in the K-12 classroom, and support their discussion with psychological learning theories.

Textbooks

Required

Ford, J. L. (2008) *Scratch Programming for Teens*. First Edition: Course Technology PTR
*Check eClass for electronic access

Optional

Gee, James Paul (2007) *Good Video Games + Good Learning: Collected Essays on Video Games, Learning and Literacy*. Peter Lang Pub Inc.

Additional Requirements

Required

- Xbox 360 Controller -

Students must obtain an Xbox 360, Windows compatible controller for the portion of the class involving KODU Video Game environment installed on a PC.

Only a WIRED Xbox 360 Controller will work. (Third-party controllers may encounter issues.)

Controllers are available at any major retailer that sells video game equipment, i.e. Best Buy, Future Shop, Superstore, Wal-Mart, etc. They are also, often, available second hand from video game specialty shops such as EB Games, GameStop, or locally run similar retailers.



Suggested

USB Memory Flash Drive

Assignments and Evaluation

Weightings

Lab

<i>Scratch</i> Tutorials	10%
<i>Scratch</i> Project	15%
<i>KODU</i> Tutorials	10%
<i>KODU</i> Project	15%

Lecture

Discussion Facilitation	15%
Discussion Contributions	5%
Final Paper	30% (25% for 597)
597 only Article Analysis/Evaluation	5%

Descriptions

Scratch Tutorials – 10%

Students will learn how to use the required text, *Scratch for Teens*, to develop basic skills for using *Scratch*, by following the chapters and completing the project at the end of each of them. These will be graded on a complete/incomplete basis, but students are encouraged to explore and add to the tutorial requirements before submitting them. This will encourage further understanding and allow students an opportunity to build their own knowledge of the software package.

Scratch Video Game Project – 15%

This is your opportunity to explore and create. Students will use the basic skills taught to them in the tutorials and expand on them to create a video game of their own concept and design. The game **does not** need to be educational (in fact, it's probably better if it's not). Students should take note of the process while creating their game, as they will be asked to reflect on their experience (No more than 2 pages single spaced) following completion of the game.

A rubric and further project description will be made available on eClass.

KODU Tutorials – 10%

As with the previous *Scratch* tutorials, students will learn the basics of using *KODU Game Lab* by completing a series of tutorials (made available on Moodle). Again, students are encouraged to expand on the requirements, and they will also be marked on a complete/incomplete basis.

KODU Video Game Project – 15%

This is the second opportunity for students to explore and create. Students will, again, create a video game, but this time using *KODU Game Lab*. It *still does not* need to be an educational game. Following the project, students will reflect on the experience one more time, this time comparing and contrasting the previous game making experience. (No more than 2 pages single spaced).

A Rubric and further project description will be made available on eClass.

Discussion Facilitation – 15%

For this assignment, students will pair up and choose an article from the list of readings (available online) and a corresponding week. The students will then post two questions in the online discussion, no later than 5 days prior to scheduled date, for the rest of the class to answer and discuss. You will then lead a discussion in class, as an extension to the online discussion, which will include two *new* questions to prompt discussion, as well as an activity for the entire class to participate in. Finally, the students will provide a short summary of the article, the discussion, and the activity, and reflect on the entire experience (No more than 3 pages single spaced)

A Rubric and further description of this assignment will be made available on eClass.

Discussion Participation – 5%

For each article being discussed online, students will be expected to answer the questions posted by their peers. Failure to do so in a timely matter, (no later than 48 hours prior to the in-class discussion) will result in a decrease in this portion of the final grade).

Final Paper – 30% (25% for 597)

This is your opportunity to bring it all together, and prove you've been *paying attention*. Students will research a subject area, preferably one they are majoring in, but not limited to, and produce a paper outlining how a constructionist classroom might be set-up for that subject area using a video game creation tool like the ones utilized in our class. This can be a description of a single assignment, or an outline for an entire class for a whole term, the choice is yours. Use what has been presented to you in the lectures, your discussion with classmates, as well as your own experiences building games to justify the decisions you are making and what you are proposing. Think of it as a pitch to a principal, who has heard a lot about "video games" in the media lately, and thinks they should "tap in" to the learning potential, but doesn't know how. You do not need to create lesson plans, only an outline and argument as to why or why not you would do what it is you are proposing. (6-8 pages double spaced. APA Formatting)

A rubric and further description of the requirements for this assignment will be posted on eClass.

(597 ONLY) Article Analysis/Evaluation – 5%

Students registered in 597 will be required to do a separate assignment that will be jointly determined between each student and the instructor, at the start of class.

Final Grades

Final Grades will be determined in a "Round of Mortal Kombat"... just kidding, but wouldn't it be great? Ah well... until the university allows it, your final grade will be computed by the grades received in each assignment and multiplying them by their respective weightings.

Students are ranked in order of total scores and a grade is assigned so that the class average falls within the University of Alberta's-suggested ranges:

Grading in Undergraduate Courses		
Descriptors	Letter Grade	GPA Value
Excellent	A+	4.0
	A	4.0
	A-	3.7
Good	B+	3.3
	B	3.0
	B-	2.7
Satisfactory	C+	2.3
	C	2.0
	C-	1.7
Poor	D+	1.3
Minimal Pass	D	1.0
Failure	F	0.0

Mean grades will usually fall into the following ranges:

Level	200	300	400
	2.73 -2.92	2.92-3.06	3.06-3.16
Average	2.83	3.00	3.11

Schedule

Our schedule will be constantly evolving, so please consult with eClass for upcoming student led discussions, the required reading for that week, as well as due dates for tutorials and projects. In general, though, we have 13 weeks together, so expect the following *highlights*, as guide.

- Scratch Tutorials 3 weeks.
- Scratch Project 2 weeks.
- KODU Tutorials 3 weeks
- KODU Project 2 weeks
- Final Paper 2 week

*Note: Fall or spring break, may shift any of these 1 week.

Required Ramblings

EQUALITY, EQUITY AND RESPECT

The Faculty of Education is committed to providing an environment of equality and respect for all people within the university community, and to educating faculty, staff and students in developing teaching and learning contexts that are welcoming to all. The faculty recommends that staff and students use inclusive language to create classroom atmosphere in which students' experiences and views are treated with equal respect and value in relation to their gender, racial background, sexual orientation and ethnic backgrounds. In order to create a thoughtful and respectful community, you are encouraged to use gender-neutral or gender-inclusive language and to become more sensitive to the impact of devaluing language.

PLAGIARISM AND CHEATING

"The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (available online) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University." (GFC 29 SEP 2003)

Bonus Assignment: Find the section called Inappropriate Academic Behaviour in the UofA Code of Student Behaviour, print it off, and highlight the sections regarding plagiarism, and part (b) of cheating. Hand it in, with your name on it, and you will receive a bonus one percent on your final grade. Don't tell the other students, either; this is your bonus for actually reading this part.

SPECIALIZED SUPPORT & STUDENTS WITH DISABILITIES

Students who require accommodations in this course due to a disability affecting mobility, vision, hearing, learning, mental or physical health are advised to discuss their needs with Specialized Support and Disability Services, 2-800 Students' Union Building, 492-3381 (phone) or 492-7269 (TTY).

"Recording is permitted only with the prior written consent of the professor or if recording is part of an approved accommodation plan."

COURSE OUTLINE CONTENT

"Policy about course outlines can be found in Section 23.4(2) of the University Calendar." (GFC 29 SEP 2003)