

Course Syllabus

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Meets	280 M 9:30-10:45; W 9:30-10:45 & online asynchronous	Office Hours	Wed 3-4pm, or by appointment

Class Website:

The class web site is available at <https://usu.instructure.com> under the “canvas” option. To log in you'll need to use the same A# and PIN you use to get into banner.

Description:

This course familiarizes students with creating *instructionally focused* interactive media. The tool used in the class will be taught this semester on a trial basis using the Unity Engine IDE (Interactive Development Environment). Topics to be covered include fundamental programming concepts (variables, variable types, code re-use, commenting code, and basic control structures) in addition to the fundamentals of the Unity environment (animation, importing and organizing media, use of graphics collections and sound, etc . . . note that video requires the professional \$1500 version of Unity). More advanced programming topics (such as object oriented programming, classes, and inheritance) are touched on but not in depth, think “consumer” of object oriented programming as opposed to a true “producer” of custom classes and object oriented programming code. The course also covers principles of interface design, assessment as it applies to embedded items, and requires the writing of an instructional design document or work plan. None of these topics are covered in depth since we have other courses that accomplish this, but they are discussed in the context of development. Students finishing this course will have at least one completed Unity project for their portfolios demonstrating a strong knowledge of the tool and a good foundation in JavaScript (one of three language choices (JavaScript/C#/Boo) used by Unity as the tool and the language apply to instructional design.

Course Objectives (aligned with IDEA Evaluation system):

- **(I) Basic Cognitive Background**, 1. Factual knowledge – articulate the difference between vector and raster graphics and when provided with a sample graphic discuss which type is most appropriate.
- **(II) Application of learning**, 4. Professional skills– import graphics into Unity.
- **(I) Basic Cognitive Background**, 1. Factual knowledge – when provided with basic animation terms for flash (timeline, keyframe, loop) supply an accurate definition of them.
- **(II) Application of learning**, 4. Professional skills– when provided with an animation task use an appropriate skills or code to complete the tween within Unity.
- **(I) Basic Cognitive Background**, 1. Factual knowledge – when provided with a set of media terms (sample rate, frequency, audio codec) be able to provide definitions of each term.
- **(II) Application of learning**, 4. Professional skills– when provided with media (such as audio) be able to import and use it within a flash file.
- **(I) Basic Cognitive Background**, 1. Factual knowledge – when provided with a set programming terms (event handlers, functions, variables, if/else control structures) and sample code segments be able to match terms with sample code segments.
- **(II) Application of learning**, 4. Professional skills– when provided with a programming task (program a button to move the camera to a certain position) and sample code to work from, be able to make the button perform the specified task.
- **(II) Application of learning**, 4. Professional skills– utilize sound design principles (both interface and instructional) to create effective learning resources.

Textbook:

There are no required texts for this class. There are however, several sources of content. The first is screencasts produced specifically for this class. For now these will consist of “spoiler videos” that help you with the weekly assignments. These are free and you can access them even after the class is finished:

<http://itls.usu.edu/~aewalker/videos/itls5245unity4dot5/> [\(http://itls.usu.edu/~aewalker/videos/itls5245unity4dot5/\)](http://itls.usu.edu/~aewalker/videos/itls5245unity4dot5/)

I would bookmark and use all of the following:

- Unity Scripting reference (make sure you choose JavaScript, should be the default language)
 - <http://docs.unity3d.com/ScriptReference/> [\(http://docs.unity3d.com/ScriptReference/\)](http://docs.unity3d.com/ScriptReference/)
- Unity Manual (mostly text and pictures)
 - <http://docs.unity3d.com/Manual/> [\(http://docs.unity3d.com/Manual/\)](http://docs.unity3d.com/Manual/)
- Unity Tutorials (lovely British Accent, all very short and very much worth your time)
 - <http://unity3d.com/learn/tutorials/modules> [\(http://unity3d.com/learn/tutorials/modules\)](http://unity3d.com/learn/tutorials/modules)
- Unity Community (if you have a question, it's probably been asked by someone else--the catch is finding it and the answer you need)
 - <http://unity3d.com/community> [\(http://unity3d.com/community\)](http://unity3d.com/community)

- Google or other open search engines
- And discussion posts by your fellow classmates

Recommended Texts:

None in terms of Unity, I've consistently had far better luck finding help online than from a book.

Technical Requirements:

You will need access to Unity in order to complete the class. Screencasts currently assume you are working with Unity 4.5. The fantastic news is that the version we are using is completely free--as long as you are not using it on behalf of a company that makes something like \$100k or more/year.

Requirements:

Completion of the work plan (20%)

Completion of the final project documentation (30%)

Completion of the final project (30%)

Completion of assignments/resource surveys (20%)

You will be responsible for keeping up in this class. Although there is some flexibility in pacing (e.g. you can work ahead on things like your work plan) you will need to stay current with the class deadlines. There will also be opportunities for assistance. **Those who do not take the available opportunities to contact me early on, either for an assignment or for the final project and then want help when a deadline looms will not get it.** If you require help one of the best things you can do is a) send me a .zip archive of your files and then b) call me on the phone. I'm willing to arrange times, but don't hold your breath for assistance on a Monday afternoon. I *highly recommend* you take advantage of the draft opportunities for the Work Plan. This is for two reasons: 1) It helps me assess whether or not your project is manageable, one of the most difficult things for you to do is decide what you can do as a culminating project while you are still learning a new development environment, so let me help you. 2) The quality of your final project is directly related to the quality of your work plan. Thus even though it's only 20% of your final grade, it impacts another 60%. Do yourself a favor and do the work up front.

Assignment submissions will be made online through links to the class website (if it happens to be down, send me the file via email) and are due as indicated in the respective rubrics, before midnight on the date posted on the schedule below.

Evaluation Criteria:

Each assignment will have specified evaluation criteria. Unless otherwise noted, your mark will be lowered by 10% for each 24-hour period in which an assignment is late. The same policy applies to all phases of the final project. **You get one free assignment to drop, no questions asked.** In return I don't want to hear about any extenuating circumstances unless you want to discuss an incomplete (see below).

Group Work:

It is rare for development to occur in a vacuum; therefore group work is *highly encouraged* for the final project. This will force you to plan ahead for how you will structure your project and agree on some common conventions. Groups can be as small as two and as large as three people. I realize that some of you work full time and have busy schedules which make group work difficult (which is why this is optional) but you will benefit the most by working in teams. If you do your final project as a group, you will be responsible for a brief (one paragraph) report on the contributions made by each team member (including yourself). Note groups hand in all of the materials related to the final project (work plan, final project, project documentation) as a group, in addition one of the assignments (dealing with embedded items) is also submitted as a group, **the rest of the assignments need to be completed individually.**

Grading Scale:

A 94% ≤ x < 100%

A- 90% ≤ x < 94%

B+ 87% ≤ x < 90%

B 84% ≤ x < 87%

B- 80% ≤ x < 84%

C+ 77% ≤ x < 80%

C 74% ≤ x < 77%

C- 70% ≤ x < 74%

D+ 67% ≤ x < 70%

D 64% ≤ x < 67%

D- 60% ≤ x < 64%

F < 60%

Plagiarism:

Plagiarism includes knowingly "representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials." The penalties for plagiarism are severe. They include warning or reprimand, grade adjustment, probation, suspension, expulsion, withholding of transcripts, denial or revocation of degrees, and referral to psychological counseling. Cases of plagiarism will not be handled in house so to speak. **I will formally report any cases to the University and then work towards resolving them directly with you.** This includes honest mistakes like not knowing you need to quote text taken directly from a source, or leaving off citations.

Because it is not intuitive on how to attribute code snippets to others I will give you a method here. In your code comments be specific when blocks of code are either taken directly or much more likely adapted from an outside source. There is not need to cite my stuff, but if you borrow from other students you certainly should. Just write the author (if available) and provide a web link to where you found the code/fla file, etc . . .

Persons with Disabilities:

Students with documented disabilities who are in need of academic accommodations should notify me and/or contact the Disability Resource Center at (435) 797-2444 and fill out an application for services. Accommodations are individualized and in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1992.

In accordance with University policy, incompletes are not to be given for poor performance. There will be no incompletes given unless the conditions are beyond the student's control. Such conditions have to have written documentation. The term "conditions beyond the student's control" includes (1) incapacitating illnesses that prevent a student from attending classes for a period of at least two weeks; (2) a death in the immediate family; (3) financial responsibilities requiring a student to alter course schedule to secure employment; (4) change in work schedule as required by an employer; or (5) other **unexpected** emergencies of this nature. When an incomplete is given, it is anticipated that the remaining work will be finished within four weeks. If the course must be retaken to make up the work, an incomplete is not appropriate; instead students should withdraw from the class (which can be done even after the regular drop period assuming the above circumstances).

Incompletes:

Requests I have received that do not qualify as incompletes:

- *You are taking too many credits this semester and don't have time to finish.*
- *You've opted to finish this class the next semester but don't want to lose your tuition dollars* (my apologies—I try to be sensitive to saving students money but I can't do this anymore, withdraw and enroll next term).
- *You are concerned about handing in a quality final project or paper with your remaining time.* You know the deadlines now—there are no surprises in this class. If you're really concerned then get started early.

Public Realm Disclaimer:

I tend to think that ideas exchanged between us may benefit the rest of the class. Unless you tell me otherwise, I'll assume that questions or comments that you make are acceptable to pass on and may email them out or discuss them with the rest of the class. I do have a really bad habit of unintentionally quoting too much text from emails. If you send a message and want to make sure that part of it remains private, separate it out from your questions and write PRIVATE in all caps ahead of it. I'll do my best to make sure I don't pass it along.

Course Schedule:

This class can be taken exclusively online (**Adobe Flash only, for now--if you want to use Flash and still come to the Thursday lab sections that is perfectly fine. I will even partner you up with another Flash learner**). For those taking the class face to face, Mondays are discussion sessions and Wednesdays are open lab times during which you can work on your weekly assignment with a randomly assigned partner.

For all of the Unity related assignments there is an associated "spoiler" video that walks you through the process for completing the work. **If you do use the spoilers you still need to customize your assignments**. Do not hand in a re-production of the spoiler videos. Pick your own layout (unless one is provided for you), your own look for graphical elements and variable names. Given that this is a highly technical class, I am here to help you (see above).

Date	Details	
Fri Jan 9, 2015	Assignment 1 - Splash Screen (https://usu.instructure.com/courses/361468/assignments/1831841)	due by 11:59pm
Fri Jan 16, 2015	Work Plan - Draft 1, Introduction and Goals (https://usu.instructure.com/courses/361468/assignments/1831829)	due by 11:59pm
Fri Jan 23, 2015	Assignment 2 - Moving Splash Page (https://usu.instructure.com/courses/361468/assignments/1831842)	due by 11:59pm
Fri Jan 30, 2015	Assignment 3 - Going 3d (https://usu.instructure.com/courses/361468/assignments/1831843)	due by 11:59pm
Mon Feb 2, 2015	Work Plan - Draft 2, All But Storyboards (https://usu.instructure.com/courses/361468/assignments/1831830)	due by 11:59pm
Fri Feb 6, 2015	Assignment 4 - Phases of the Moon Buttons (https://usu.instructure.com/courses/361468/assignments/1831834)	due by 11:59pm
Fri Feb 13, 2015	Assignment 5 - Controlling Content (https://usu.instructure.com/courses/361468/assignments/1831835)	due by 11:59pm
Fri Feb 27, 2015	Assignment 6 - Phases of the Moon Navigation that Informs (https://usu.instructure.com/courses/361468/assignments/1831836)	due by 11:59pm
Fri Mar 6, 2015	Assignment 7 - Item Writing (https://usu.instructure.com/courses/361468/assignments/1831838)	due by 11:59pm
Fri Mar 13, 2015	Assignment 8 - Phases of the Moon Multiple Choice (https://usu.instructure.com/courses/361468/assignments/1831837)	due by 11:59pm
Fri Mar 20, 2015	Assignment 9 - Drag and Drop (https://usu.instructure.com/courses/361468/assignments/1831839)	due by 11:59pm
Fri Mar 27, 2015	Assignment 10 - Navigation By Scene (https://usu.instructure.com/courses/361468/assignments/1831840)	due by 11:59pm
Mon Apr 6, 2015	Work Plan - Final Draft, Including Storyboards (https://usu.instructure.com/courses/361468/assignments/1831831)	due by 11:59pm
Wed May 6, 2015	Final Project (https://usu.instructure.com/courses/361468/assignments/1831832)	due by 11:59pm
	Final Project Documentation (https://usu.instructure.com/courses/361468/assignments/1831833)	due by 11:59pm