

CSCI E-28 Games and Gamers (13170)

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Class Meetings: Wednesdays, 5:30-7:30 pm; Optional Section: 7:35-9:30 pm
53 Church Street, Rm 104

Course Description

This course investigates the history, culture and practical development of 2D computer games as a foundation for developing new game experiences for entertainment and education. Students will design and code their own games using Flash and Actionscript 3. We will explore a variety of game types - arcade, sidescroller, and turn-based multiplayer games from cultural, aesthetic and technical perspectives. Students will have the opportunity to develop their own versions of classic games along with developing their own game ideas.

Prerequisites

A basic understanding of programming concepts and methods is required. This course will use Flash and Actionscript 3. It is intended for students who have an interest in programming and basic experience in some programming language.

Required Text:

Learning ActionScript 3.0
By Rich Shupe, Zevan Rosser
ISBN 10: 0-596-52787-X | ISBN 13: 9780596527877

Additional Readings: additional required readings will be provided online.

Suggested Text

Essential ActionScript 3.0
By Colin Moock
ISBN 10: 0-596-52694-6 | ISBN 13: 9780596526948

This book is an excellent and in-depth exploration of Actionscript 3. Highly recommended

If you are not familiar with the basics of the Flash authoring tool, a good book is:
Sams Teach Yourself Adobe® Flash™ CS3 Professional in 24 Hours
By Phillip Kerman
ISBN-10: 0-672-32937-9 ISBN-13: 978-0-672-32937-1

Basic Flash Tutorials Online

<http://flash-creations.com/notes/>
<http://www.kirupa.com/developer/flash/index.htm>

Schedule

Class 1 09.17.08
Intro to Class; requirements; overview

Flash/Actionscript 3 Overview
Review of Flash timeline-based authoring

Class 2 09.24.08 Sketch #1 due: Self-portrait as A Game Character

A Short History of Video/Computer Games
Intro/Review of Programming Concepts
The Flash Scripting Environment

Class 3 10.1.08

Game Genres
Flash: The Display List
 Display Object Containers
 Event Listeners & Functions
PONG

Class 4 10.8.08

Coding PONG
Flash: Collision Detection
 Loading Library Assets
 The Document Class

Class 5 10.15.08 Sketch #2 due: Side-Scroller

Decision Trees and Finite State Machines
Game Level Architectures
Flash: Loading External Assets & XML

Class 6 10.22.08

Flash: Object-Oriented Programming in AS3
What is a Game?
Game Design Principles

Class 7 10.29.08

Flash: OOP 2
Who's the Boss: Control Architectures in Games
What Makes a Good Game?

Class 8 11.5.08 Sketch #3 due:

Who Plays?
Approaches to AI in Games

Class 9 11.12.08

Point, Shoot, Score: Twitch Games
Game Physics

Class 10 11.19.08

Path-finding in Grid-Based Games

**Class 11 12.3.08 Sketch #4 due
Final Project proposals due**

Games for Learning and Teaching

Class 12 12.10.08
Game Interfaces
Flash: Graphics Class
 BitmapData Class

Class 13 12.17.08
Multi-player Flash games

Class 14 1.7.09
One-on-one help with Final Projects

Class 15 1.14.09 Final Project due
Final Project Presentations

Assignments and Grading

- Readings and participation in class activities (20%)
- Sketches (40%)
- Final Project (40%)

Original Work and Use of 3rd Party Source Code & Media Assets

There are many excellent examples of Actionscript source code to be found in the course text and on the Internet. I encourage you to examine and work with these examples in order to better understand coding practices and approaches. If any 3rd party code is used in your projects (for example the APE physics engine) you must give appropriate references and citations.

Media assets such as images, sounds and video may come from any source so long as appropriate references are given.

About Flash Versions

You need Flash 9 (CS3) to do the work in this course. Flash 9 is what is provided in the labs on campus, so you can do all of your work in the labs. If you have your own computer and are unable to purchase Flash at this time, I strongly recommend that you download the 30 day trial version of Flash: <http://www.adobe.com/products/flash/>.

Assignments

There are 4 graded "sketches" and the final project. The purpose of the sketches is to code the core functionality of a game idea without being concerned about the overall design or visual style. 90% of your time on the sketches should be in working with the code, using whatever simple placeholder art you may need. The final project, on the other hand, should represent a complete work in terms of the concept, coding and media assets used.

Sketch #1: Self-Portrait As A Game Character

If you were a game character who or what would you be? This sketch is meant to be an introduction or refresher on working with the timeline in Flash. Have some fun with this. The only requirement is that a photo of you and your name appear somewhere within the Flash presentation.

Sketch #2: TBD

Sketch #3: TBD

Sketch #4: TBD

Final Project:

The focus and theme of the final project is up to you. It should be a game and should represent a significant effort. You can choose to develop one of the earlier sketches or start something new. A proposal describing your project idea is due **12.3.08**.

Checklist for submitting assignments

All work is to be submitted online and should be viewable online. You can publish your work to your FAS account or to any other web account to which you have access.

1. Naming convention:

Please use the following naming convention when publishing your file:

lastName_firstInitial_sketchNumber

and include an underscore between each element. For example, if your name is Jane Doe and you are submitting sketch 1, the root file name would be:

doe_j_01

The source file (.fla) name would be:

doe_j_01 .fla

Assignments that do not follow these naming conventions will not be reviewed or graded.

2. Required files:

When publishing a Flash project to be viewed through a browser, three separate files are created. All of these files must be uploaded to your web account in order for your project to be viewed correctly. Using the example above Jane would need to upload the following files

doe_j_01.swf - this is the published Flash file

doe_j_01.html -this is the html wrapper for the .swf

AC_RunActiveContent.js

(unless this file already exists in the target directory)

You must also .zip compress and upload your source (.fla) file using the same naming convention:

doe_j_01.zip

3. Due Dates:

Your assignments are due at **12:01 AM** on the date listed for each assignment. This is the night before class. Once you have uploaded your files and **TESTED** that the links work, you should send me an **email** with links to your project **.html**

and **.zip** files. Do not send me your assignments as attachments; they will not be reviewed.

In your email you should also briefly describe:

1. What you were trying to accomplish
2. Any technical or other issues you may have encountered

* Preliminary syllabus; subject to change prior to first class meeting