

Video Game Prototyping: *Studies in Game Mechanics* (5 credits)

Arts College 653

prerequisites: Arts 756 *Programming Concepts for Artists and Designers*, or similar programming experience
Arts 741 *Interactive Arts Media II*, or similar interactive media experience

times: TR, 4:30 – 6:30pm

Course Description

This course will survey theories of game design, explore definitions of *fun*, *game*, and *play*, and focus on underlying mechanics that work in concert to make a video game fun to play.

Course Objectives and Student Learning Outcomes

Objectives:

- ◀ survey milestones in video game history
- ◀ discuss and form opinions on the definitions of *fun*, *game*, and *play*
- ◀ understand the difference between *game design* and *game mechanics*
- ◀ play and analyze a wide variety of video games
- ◀ identify fundamental game mechanics and put them into practice with a game prototype
- ◀ apply theories of game design to critique and improve game prototypes

Outcomes:

By the end of the course, students should have an appreciation for the Golden Age of video game history, an understanding of common game mechanics, and a foundational grasp of game design theory. Students will also have created several working game prototypes that can be played on the Nintendo Wii Internet Channel.

Course Methodology

Lectures will present topics on video game history, archetypal game genres, fundamental game mechanics, and technical considerations for game creation.

Students will engage in class discussions of assigned readings on game design theory. They will find, play, and report on real world video games, analyzing their design and mechanics.

Students will prototype novel game ideas and explore applications of core game mechanics by creating Flash or Javascript games compatible with the Nintendo Wii Internet Channel. Student games will be presented and critiqued in class, and further revised based on feedback.

This course will introduce students to fundamental concepts and strategies for creating video games. Development tools and code libraries will be provided to shorten the production cycle and keep student effort focused on exploration of novel game concepts. Examples will be given to illustrate concepts and techniques, but students will prototype and discuss their own games.

The class format will follow a general schedule of lecture, demonstration, homework, critique, discussion. Examples will be presented in lectures and demonstrations. Students will present their homework in critique sessions, to facilitate discussion of the topic at hand.

Course Calendar

Format:

- ◀ *every class:* read article and come prepared to discuss in lecture
- ◀ *every week:* play 2 games and add dissection to wiki notebook, contrast in class
 - ◀ goal
 - ◀ setting / premise
 - ◀ user actions, control mapping

- ◀ challenges
- ◀ scoring / rewards
- ◀ strategies
- ◀ *every two weeks*: create game around theme and demo in class
 - ◀ single player
 - ◀ mouse driven (gesture and click)
 - ◀ web delivered, linked from course page
 - ◀ Flash Player 7, ActionScript2
- ◀ *for the final*: summarize learnings from quarter

Reading / Discussion (20 topics):

- ◀ Intro to Tool Chain for Game Development
- ◀ Wii Internet Channel Dev Specs accad.osu.edu/~pgerstma/wii/
- ◀ Basic Game Structure, example and dissection
- ◀ How to Prototype a Game in 7 Days www.gamasutra.com/features/20051026/gabler_01.shtml
- ◀ What is Fun? What is its relationship to Play? algorithmancy.8kindsoffun.com
- ◀ What is Gameplay? en.wikipedia.org/wiki/Gameplay
- ◀ Why Play is Vital www.ted.com/index.php/talks/stuart_brown_says_play_is_more_than_fun_it_s_vital.html
- ◀ Define 'Video Game'
- ◀ Define 'Game Design'
- ◀ What are Game Mechanics? en.wikipedia.org/wiki/Game_mechanics
- ◀ Fundamental Game Mechanics - dance, chase
- ◀ Will Wright, Spore www.ted.com/index.php/talks/will_wright_makes_toys_that_make_worlds.html
- ◀ Brenda Laurel, Games for Girls www.ted.com/index.php/talks/brenda_laurel_on_making_games_for_girls.html
- ◀ David Perry, Games Better than Life www.ted.com/index.php/talks/david_perry_on_videogames.html

Selections from:

- ◀ Lost Garden, www.lostgarden.com
- ◀ GamesLOL, www.gameslol.com
- ◀ The 400 Project, www.theinspiracy.com/Current%20Rules%20Master%20List.htm
- ◀ A Theory of Fun for Game Design, Raph Koster
- ◀ Rules of Play, Game Design Fundamentals, Katie Salen, Eric Zimmerman
- ◀ The Game Design Reader, A Rules of Play Anthology, Katie Salen and Eric Zimmerman
- ◀ The DotEaters, www.thedoteaters.com

Games - Dissections (10 topics):

1. *basic* - rock, ship, memory
2. *exploration* - adventure, rogue, pac-man, mario, maze, etc.
3. *narrative* - zork, monkey island, space quest, myst, etc.
4. *audio* - dance-dance revolution, audio maze, simon, parappa, res, etc.
5. *intensity* - robotron, asteroids, centepede, tempest, etc.
6. *driving* - night driver, sprint, spy hunter, etc.
7. *sports* - ping-pong, track & field, soccer, etc.
8. *puzzles* - sokoban, cat escape, ball shot, alien attack, tetris, locked in the office, etc.
9. *dexterity* - putt-putt, finger racer, kick-ups, etc.
10. *strategy* - lode runner, turf wars, tower defense, etc.

Games - Creation / Final (5 game projects, 1 final presentation):

Games:

- ◀ declare a theme (gravity, tempo, matching, etc.)
- ◀ write a paragraph
- ◀ make a sketch
- ◀ playable by first thursday
- ◀ done by second thursday

Final:

- ◀ top five things that did not work in games and why
- ◀ top five things that worked in games and why
- ◀ working habits that hindered / promoted development
- ◀ favorite game concept, why, and how it could be nurtured into a fullgrown game

Course Bibliography

The 400 Project.

<<http://www.theinspiration.com/Current%20Rules%20Master%20List.htm>>

Brathwaite, Brenda, and Ian Schreiber, *Challenges for Game Designers*.

Charles River Media; 1st edition (August 21, 2008). ISBN-13: 978-1-584-50580-8.

Fullerton, Tracy, *Game Design Workshop: A Playcentric Approach to Creating Innovative Games*.

Morgan Kaufmann; 2nd edition (February 8, 2008). ISBN-13: 978-0-240-80974-8

Koster, Raph, *A Theory of Fun for Game Design*.

Paraglyph; 1st edition (November 6, 2004). ISBN-13: 978-1-932-11197-2

Salen, Katie, and Eric Zimmerman, *Rules of Play, Game Design Fundamentals*.

MIT Press (October 2003). ISBN-13: 978-0-262-24045-1

Salen, Katie, and Eric Zimmerman (Eds.), *The Game Design Reader, A Rules of Play Anthology*.

MIT Press (December 2005). ISBN-13: 978-0-262-19536-2

Schell, Jesse, *The Art of Game Design: A Book of Lenses*.

Morgan Kaufmann (August 1, 2008). ISBN-13: 978-0-123-69496-6

Course Resources

See <<http://www.accad.osu.edu/~pgerstma/class/pla/resources/>>

Course Assignments

Students will be given an overall grade based on their coursework weighted as follows:

14% class participation

33% weekly tasks

53% biweekly projects

Course Grading Scale

| | | | | |
|----|---|------|---|-----|
| A | = | 100% | - | 95% |
| A- | = | 94% | - | 90% |
| B+ | = | 89% | - | 87% |
| B | = | 86% | - | 84% |
| B- | = | 83% | - | 80% |
| C+ | = | 79% | - | 77% |
| C | = | 76% | - | 74% |
| C- | = | 73% | - | 70% |
| D+ | = | 69% | - | 64% |
| D | = | 63% | - | 60% |
| E | = | 59% | - | 0% |

Course Grading Policy:

Students must demonstrate satisfactory achievement of course objectives by skillfully completing course assignments and contributing to class discussions and critiques. Course assignments will require students to use a wide variety of software and equipment to produce video games. Collaboration between students in the course and other faculty, staff and students at ACCAD is encouraged.

All students are required to be on time and in attendance for each and every class. Students arriving to class more than 10 minutes late will be counted as absent. Two absences will lower a final grade by half a letter, three absences will lower a final grade by one letter and four absences will result in failure of the course.

Adherence to deadlines is expected. It is the individual student's responsibility to keep track of deadlines and to present the work to the class and instructor on the specified dates. 15% per class will be subtracted from late assignments.

Students choosing to use "at home" hardware and software must have their current working files on the course system and available for review at the beginning of each and every class. Problems with home systems or incompatibilities will not be an acceptable excuse for missed goals. Technical problems will happen frequently during the quarter and students will have trouble accessing the computer lab during "prime time" hours. Students must make their own arrangements for overcoming these difficulties and submitting their work on time. Unless there is a complete system failure in a computer-related course, technical difficulties are never an acceptable excuse for not meeting a deadline. Students should plan their time and workload to anticipate the technical hurdles that are a part of this profession.

Academic Dishonesty

Any and all suspected cases of academic dishonesty will be dealt with according to university procedures. Students are referred to the student handbook for further information on academic dishonesty and the accompanying procedures and penalties.

Students can read the code of student conduct at:

http://studentaffairs.osu.edu/resource_csc.asp

Accommodations for Students with Disabilities

It is the intent of the University and its instructors to provide access to support services and programs that enable students with disabilities to succeed in this course. Students with disabilities are responsible for making their needs known to the instructor and seeking available assistance in a timely manner. Students will be referred to the Office for Disability Services (ODS), located in Pomerene Hall, for further assistance (call 614-292-3307 or visit 150 Pomerene Hall).

Personal Safety

The University Escort Service operates until 3am when classes are in session (i.e. not during quarter breaks and University holidays), and will assist OSU students who live off campus as well as on campus. The University Escort Service can be contacted at 614-292-3322, and scheduled pick-ups are taken in advance.