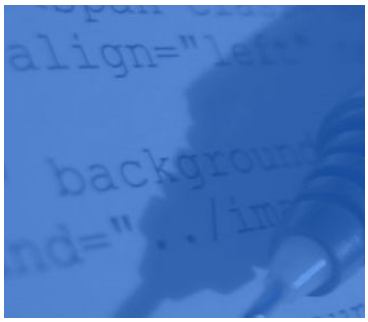
Miami University: Interactive Design



Course Number and Section: IMS390i Digital Prototyping	
Term: Fall, 2009	**Meeting Time**: Tuesday: 6-830pm
	Location: Hiestand 200
Instructor: Lindsay D. Grace	
Office Phone: 513-529-2203	**Email**: LGrace@muohio.edu
Office Address: Hiestand 206	
Course materials may be found at: **Support Site**: http://Miami.LGrace.com (no login required) **Course Site:** https://my.csi.muohio.edu/ (login required)	
Office Hours: 10:45 am – 1:45 pm Thursday and by appointment	

Course Overview:

In industries where rapid design and development processes are growing, prototypes are becoming the way to sell your idea. Whether it's an art installation, a brand new idea in video game design, or a website that breaks convention, good digital prototypes are your proof of concept. This creative course helps artists, scientists and everyone in between learn to build effective prototypes that demonstrate and test your ideas. Students will learn a variety of rapid prototyping techniques, building a variety of self-designed projects.

This course will incorporate a diverse set of digital and non-digital techniques and tools to sell your ideas

Please review digital course packet for reading materials. All reading is provided via website links and downloadable pdfs. The reading is a multi-disciplinary cross-section of rapid prototyping literature.

Students may also receive additional timely articles and excerpts from standard texts available, based on general class need and interest.

Required Materials

Reliable Storage Media: USB Drive or portable hard drive for in-class work
Access to image manipulation software (Illustrator, Photoshop, GIMP, etc), linear editing software (FinaL Cut, Premier, Windows Movie Maker, etc), and 3D modeling and rendering software

Estimated Homework Hours:

This course meets once a week, with the expectation that you have completed the bulk of your work prior to class. Class hours are for instructor lead demonstration, student presentations of work completed, and lecture. **Expect a minimum of 6 hours of homework** outside of class, including time to read materials, prepare presentations, learn any required software and creative time.

Objectives:

Upon successful completion of this course, students should be able to:

1. Demonstrate critical thinking and creative writing skills in the production of a digital prototype for an interactive project

2. Exercise planning and organizational skills in the production of a written and oral description of the scope and sequence of the an interactive project.
3. Effectively demonstrate a proposal for an interactive project
4. Critically evaluate a proof of concept, concept video, or other digital production designed to demonstrate the potential in a proposed solution.
5. Create an effective proof of concept for a client or marketing purposes
6. Produce a proof of concept digital prototype using appropriate software.
7. Analyze project asset needs and control all files and assets.
8. Collect, create, synthesize and optimize audio, video and graphic elements for the production of a digital prototype.

Course Schedule

	Topic(s)	**Due at the start of class**
Week 1: 1/12/10	What is a Digital Prototype and why use them? Intro to Design Thinking and fundamanetals of the prototyping design process Identifying software 1	
Week 2: 1/19/10	Introduction to: *Design Thinking, Iterative Design, Prototype thinking, Rapid Design* Identifying Software 2 **CPA Tour – our first design task**	***Presentation 1 – The Best Proof of Concept Video You can Find*** Reading 1: Strategy by Design, Tim Brown Reading: Integrating Prototypes into your Design Process
Week 3: 1/26/10	Using Digital prototypes to sell (ideas, installations, art and architecture)	**Presentation 2 - Pitch Idea for Project 1 (Space)** Reading 1: How to Pitch an Idea Reading 2: How to Prototype a Game in 7 days
1/29-1/31	**Global Game Jam (Benton Hall et al)**	
	Telling the story- identifying problems and creative	Reading – Jean Buadrillard

Week 4: 2/2/10	solutions **The Photoshop compositing and fakes tutorial**	Simulacra Simulation (excerpts as provided)
Week 5: 2/9/10	The Business Marketing Prototype The Business of Prototypes	**Project 1 – Digital Prototype of Proposal for CPA** Reading 1:Autodesk What is prototyping (1 page engineering perspective) Reading 2- Introduction to Digital Compositing (Chapter 1 of Digital Compositing book)
Week 6: 2/16/10	3D Modeling 101- Google Sketch Up, Maya and Photoshop (alt Rhino3D, 3DS Max, et al)	**Presentation 3 – Pitch idea for Project 2** Reading 1**:** PROTOTYPES IN ARCHITECTURAL EDUCATION: AS INSTRUMENTS OF INTEGRATION IN THE DIGITAL ERA Reading 2(as needed): Introduction to 3D modeling w/ selected app (choose from list provided)
Week 7 2/23/10	Linear Editing and Video 101 Project 2 lab session	***Reading (as needed)- Introduction to Non-Linear Editors(choose from list provided)***
Week 8 **3/2/10**	Sound	**Project 2 Due**
Week 9- 3/9	**Spring Break**	
Week 10: **Back to the Drawing Board** 3/2/10	Project 3 Studio hours – review and refine existing tech skills – Compositing and modeling	***Reading: The Power of the Prototyping Mindset*** *(post Spring Break refresher)*
Week 11 **What We Learn from Prototypes** 3/16/10	Project 3 Studio hours **Evaluation and Feedback Session 1**	**Presentation 4 – Pitch for Proposal 3** Reading: Evaluating Prototypes and Proof of Concepts
Week 12:	**Interactive Prototyping –" things that sort of work" –**	**Presentation 5 – What I've**

3/23/10	**using low-fi solutions for quick demonstrations**	**Learned from my Prototype(s)**
Week 13: **3/30/10**	Intro to Processing.org and other Interactive Tools	Project 3 Due
Week 14: 4/6/10	**Evaluation and Feedback Group Sessions 2**	**Presentation 6** – Pitch for Proposal 3
Week 15: 4/13/10	Project 4 Studio hours	Reading: Individual Supplements
Week 16: 4/20/10	Project 4 Studio Hours	Reading: Individual Supplements
Week 17: 4/27/10	**Project 4 Due– Final Project Demonstrations and Final Gallery**	
May 3- 7	Finals Week	**Project 5 – polished version of any previous project**

*Schedule subject to change based on scheduling, student need and at the instructor's discretion.

Grading System:

Point Score range	Letter Grade
93 and above	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
Below 62	F

Score Breakdown:

- **Presentations (5% each x 6)** **30%**
- **Project 1: CPA Gallery Design** **10%**
- **Project 2:** **15%**
- **Project 3:** **20%**
- **Project 4:** **20%**
  - **Project 5 revision of any prior project (replaces your weakest project score)**
- **Participation:** **5%**

Course Requirements and Policies

All students must adhere to the guidelines set forth by the Miami University handbook.

Assignments

All assignments are due at the beginning of the class.

Students should provide a copy of their design work on a clearly labeled CD and have a formal presentation of their work to present on the due date. All assignments must be clearly labeled (filenames, correct file extensions, etc), and provided in a system folder with the students first and last name.

Students should always keep a backup copy of their work. Lost data or computer failures are not excuses for poor or missing work.

No late assignments will be accepted. In this course, assignments build on the previous. Failure to complete prior assignments will make each subsequent assignment more difficult. It is in your best

interest to complete each assignment on time and to the best of your ability. Always hand in what you have, even if it does not work. **Partial credit is better than no credit at all.**

A separate list of evaluation criteria are provided for the major projects in this class. Please review that list for further details.

Assignments: Formatting

Projects must run, without any significant modification in the Hiestand 200 lab using the computers available in that room. Projects will not be considered complete if they do not execute as expected. You are responsible for making sure that all projects are viewable.

Specs:

- All video project should be rendered at least 1024/768 resolution (or comparable based on aspect ratio)
- All animation should 27 fps or greater.
- Projects must be submitted as a self contained standard video file (mov, wmv, or avi), high resolution images (300 dpi print resolution), Windows executable (.exe), or Macintosh application (app or dmg) file. Do not provide application specific project files (e.g. Maya scene files, Sketch Up resource files, Photoshop psd, etc). If you need special consideration, please clear it with the instructor a week before submitting your final project
- All final projects must be posted to the **course management system** and the **course blog**
- **All students must complete at least two projects involving moving image (video or animation)**

Participation Grade (5%):

Students are encouraged to ask questions and initiate dialogue about interaction design in the course. Given the diverse set of majors participating in the course, there is terrific potential for informative discussion.

This course is delivered through a studio/lecture model. As such, critiques are used as opportunities to share ideas and provide constructive feedback about design and technical considerations for everyone's project. Positive and negative feedback should be provided by all students in the class.

Participation grades are determined by students willingness to answer questions, preparedness for discussion (did you do the reading?), and the feedback they provide in class. Absences will negatively effect your participation grade. In cases where a blog or forum is used for the class, students' contributions to the blog or forum effect their participation grade.

All students are required to provide useful feedback on their peers' projects though the class polling system and blog. If you are unfamiliar with how to provide effective critique, please review the document titled "critique list" provided on the course website.

Attendance / Absences:

As stated in the Student Handbook, you are expected to attend all scheduled class meetings. The attendance policy for this course is as follows: Up to two absences will be tolerated without penalty. Three unexcused absences will result in the final grade being lowered one letter grade (10pts. on a 100pt. scale). Four unexcused absences will result in the final grade being lowered two letter grades. The fifth unexcused absence will be regarded as the final cut and the Registrar will be notified to drop the student from the course. The three absence allowance is provided for emergency and health related situations. It is the student's responsibility to provide information concerning all absences and you should speak to the instructor before missing a class. The determination of an excused (vs. unexcused) absence is up to the discretion of the instructor (doctor's written excuse for example). Please do not arrive late or leave early from class. If you arrive late it is your responsibility to make sure you're counted as present. Please see the student handbook for specifics on university policies.

All planned absences should be clearly explained in an email sent to the instructor before the student misses the class. The instructor will reply indicating whether or not the absence is excused.

All issues of attendance and tardiness will be handled as school policy dictates and at the discretion of the instructor.

In Class Conduct:

In-class web surfing, email, electronic chat, text messaging, or related behavior is prohibited during class meetings. Please be attentive to people's comments and engage yourself in class.

No recording (audio or visual) of this class may be made without the prior written consent of the instructor.

Statement of Community and Non-Discrimination: Miami University is committed to fostering a supportive learning environment for all students irrespective of individual differences in gender, race, national origin, religion, handicapping condition, sexual preference or age. Students should expect, and help create, a learning environment free from all forms of prejudice. If disrespectful behaviors occur in class, please seek the assistance of your instructor or the IMS director.

Disability Support

Students who have any disability, either permanent or temporary, which might affect their ability to perform in this class, are encouraged to inform me immediately." (If a student self-identifies, please contact the Rinella Learning Center (9-8741). Website: http://www.units.muohio.edu/saf/lrn/

Cheating and Plagiarism:

Any student that cheats or plagiarizes will be reported to the academic standards committee and may be dismissed from the course. A student may be considered in violation of cheating and plagiarism policy if they present the work of others as their own, even if the work is provided through multiple online and print resources. Much like a writing course, students involved in web scripting, programming and related activities should attribute their work by stating the resource from which the work was derived. This is common practice in industry. Examples of such attribution are provided below:

<!--An implementation of the "floating div alignment hack" as first offered by Sarah Smith at CSSZenGarden.com on April 30, 2009-->

//Bubble Sort algorithm in Actionscript provided at //http://mike.newgrounds.com/news/post/59329

/* Derived from Craig Reynold's Boids Flocking Behavior as specified on pp. 48-52 of Great Game Algorithms, ISBN 1233131321 */

All homework is to be completed independently (except when told otherwise). Any student who is caught or suspected of working in conjunction with any other student will be penalized. Using lines of code borrowed from any source other than the prescribed book for this course will be considered plagiarism unless the student clearly credits their source. Do not use websites, message boards, chat rooms, or other related resources to solve homework problems.

When presenting your work, you should also credit sources and attribute work appropriately.

It is safer to *over attribute* your work., than to risk failure by taking credit for work you did not create.