

University of Minnesota Duluth
Department of Art + Design
Spring Semester 2008

ART4908-003 INTERACTIVE DESIGN I

Monday, Wednesday 10:00 – 11:50 am in MON209

Final Exam: Tuesday, May 13th, 8:00 – 9:50 am

Beth Koch, Assistant Professor
Office hours: MW 1:30–2:30 pm;
TR 10:00–11:00; and by appointment
Office location ENG242
Faculty mailbox HUM317
Phone number 218-726-6961
bekoch@d.umn.edu

COURSE OVERVIEW

ART 4908 Interactive Design 1 is an advanced course in the Graphic Design program at The University of Minnesota Duluth. This course addresses graphic design knowledge and technique in the conception, development, and production of interactive media work. Specifically, this course addresses working knowledge of Adobe Flash, a multimedia authoring software program that allows users to develop and create dynamic and interactive works. In order to fulfill the course requirements you are expected to actively participate and assist in class, complete all assignments, tutorials, and projects.

PREREQUISITES

Graduate or undergraduate Graphic Design Major, successful completion of both ART 2911: Graphic Design 1, and ART 4907: Motion Graphics.

STRUCTURE

The class structure is primarily studio-oriented and project-based. It consists of presentations, demonstrations, tutorials, readings, research activities, reports and discussions, assignments, one major course project, and group and individual critiques designed to meet the following course goals:

GOALS

1. Understand the scope and capabilities of Flash software.
2. Understand basic tenets of user-centered interactive design.
3. Internalize and utilize design processes for interactive design projects.
4. Understand how design principles apply to digital environments.
5. Confidently approach interactive problem solving: know how to frame questions and assemble resources to independently solve problems.
6. Capably troubleshoot and solve technical challenges.

OBJECTIVES

- Evaluate physical environments and electronic spaces to articulate navigation and interaction issues.
- Analyze audiences, messages, and methods for solving communication, navigation, and interaction problems.
- Apply interactive organizational structures and methods to organize electronic space.
- Experiment with time, sequence, and pace to manipulate imagery.
- Discover and resolve design issues including legibility and readability.
- Troubleshoot and solve technical problems.
- Practice developing research questions and independently exploring resources to solve problems.
- Explore the capabilities of Flash by practicing tutorials.
- Create innovative and experimental designs.

TOPICS & ISSUES

We will examine key topics in interactive media including interface design, information architecture, creativity, and professional practices. We will study and discuss state-of-the-art interactive design and games. Students will learn about human-computer interaction and employ the interactive design process. Then students will complete all of the tutorials in the textbook in order to apply knowledge to develop three major projects: a frame-by-frame animation, a shape/motion tween animation, and a final interactive project.

PROJECTS

1. **Interactive design process and interface research project**
2. **Tutorials**
3. **Frame-by-frame animation**
4. **Shape or motion tween animation**
5. **Interactive project: narrative, game, procedure or process**

TEXTBOOK

Adobe Flash Professional CS3 Hands-On Training (H-O-T)*, Author: James Gonzalez, Publisher: lynda.com/books
Peachpit Press ©2007 Highly recommended: ActionScript CS3 Hands-On Training (H-O-T)*

*You will need the CD-ROMs enclosed inside the back covers.

GRADING POLICY

Grades will be determined by performance as noted in the weight distribution section below. Projects will be given a letter grade based on the + or - system. Your grade will reflect the caliber of your concept, creativity and innovation of the design solution, interaction complexity and technical richness, the interface architecture, and the advancement of your concepts and craftsmanship in the production of your solution.

GRADING SCALE

96–100 = A
90–95 = A-
87–89 = B+
84–86 = B
80–83 = B-
77–79 = C+
74–76 = C
70–73 = C-
67–69 = D+
64–66 = D
60–63 = D-
below 60 = F

WEIGHT DISTRIBUTION OF PROJECTS

Your final grade is determined as follows:

10% Process and research in Interface Design
10% Tutorials
25% Frame-by-frame animation
25% Shape and motion tween animation
30% Interactive final project

A. Excellent—This work is professional quality in every respect. It exceeds or excels at every point of the performance criteria as set forth by the problem. In order to earn an “A” for the course students must earn “excellent” marks on every project.

B. Good—This work is above average but lacks innovation or craftsmanship superiority.

C. Satisfactory—This work has fulfilled the requirements for the project in every respect.

D. Poor—Below Average—This work may fulfill a few of the requirements \ of the project, but demonstrates a substantial lack of understanding of it’s objectives.

F. Unacceptable—Work that does not fulfill requirements or objectives.

ATTENDANCE AND PUNCTUALITY

Students are expected to attend all class meetings as scheduled. Three absences per semester may be excused for illness or emergency; each absence that exceeds this number will result in the lowering of your final grade one full letter grade (A to B, B to C, etc). If you must miss class, you are responsible for getting lecture notes from a classmate. Attendance on critique days is crucial. Attend critiques even if you are unprepared or not finished with your work—much of the learning in studio courses lies in the exchanges that happen during critiques. At the instructor's discretion, late homework or late projects may be accepted in the rare case of emergency or illness. Grades for late work will be lowered one level (A to A-, B- to C+, etc.). Requests for an incomplete will be addressed on an individual basis, but require completion the following semester. Final exams cannot be made up.

WORKLOAD

For undergraduate courses, one credit is defined as equivalent to an average of three hours of learning effort per week (over a full semester) necessary for an average student to achieve an average grade in the course. For example, a student taking a three credit course that meets for three hours a week should expect to spend an additional six hours a week on coursework outside the classroom. (<http://www.umn.edu/usenate/policies/grades&acadwork.html>)

EXPECTATIONS OF STUDENTS

- Students are responsible for all class meetings, including any information in the syllabus.
- Students are responsible for being on time and for preparing for all class sessions.
- Students are responsible for meeting all course requirements, observing all deadlines, examination times, and other course procedures.
- Students are responsible for seeking help when needed.
- Students may not make commercial use of their notes of lectures or University provided materials without the express written consent of the instructor.

CLASSROOM CONDUCT

All activities in the University, including this course, are governed by the University of Minnesota Student Conduct Code. Students who engage in behavior that disrupts the learning environment for others may be subject to disciplinary action under the Code. In addition, students responsible for such behavior may be asked to cancel their registration (or have their registration canceled). The University's Student Conduct Code can be accessed at <http://www.d.umn.edu/assl/conduct/code>. Behavior that substantially or repeatedly disrupts the instructor or students is prohibited. Disruptive behavior includes inappropriate use of technology in the classroom.

ACADEMIC MISCONDUCT

Academic dishonesty is regarded as a serious offense by all members of the academic community and is defined as any act that violates the rights of another student with respect to academic work, or that involves misrepresentation of a student's own work. Academic misconduct includes but is not limited to: cheating on assignments or examinations, plagiarizing pieces of work, depriving others of necessary coursework, and sabotaging another's work. Discovery of academic misconduct is grounds for an "F" or "N" in the course. This policy sanctions students engaging in academic dishonesty with penalties up to and including expulsion from the university for repeat offenders. UMD's Student Academic Integrity Policy, which can be found at www.d.umn.edu/assl/conduct/integrity.

Copying another's words, work, or ideas is against the law. Work which is found to be in violation of United States or International Copyright Laws will automatically receive a failing grade. In addition, the department head may deem further admonishments in accordance with University policies.

HARASSMENT

The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Reports of harassment are taken seriously, and there are individuals and offices available for help.

ACCOMMODATIONS

Students with disabilities are encouraged to contact UMD Disability Services & Resources to discuss their individual needs for accommodations. Please let your instructor know how to assist you with accommodations as soon as possible.

ART4908–002 CALENDAR SPRING 2008**subject to change**

January	W 23	Introduction + Tutorials
	M 28	Interface Design Readings
	W 30	Research, Photography + Sketches

February	M 4	Written interface report
	W 6	Electronic Illustration in Flash
	M 11	Small Group Troubleshooting
	W 13	Final Project One Due +Tutorials
	M 18	Frame-by-frame project
	W 20	Scanning + Tracing images
	M 25	Assembling the timeline
W 27	Small Group Critique	

March	M 3	Tween animation project
	W 5	Research + Exploration
	M 10	Sketches
	W 12	Keyframes + Sequencing
	M 17	Electronic Layout
	W 19	Critique
	M 24	Interactive Project
	W 26	ActionScript capabilities
	M 31	Research + Exploration + Concepts

April	W 2	Users + Mapping Actions
	M 7	Gather content + Electronic Layout
	W 9	Edits + Iterative Design Process
	M 14	Mid-Point Critique
	W 16	Edits + Iterative Design Process
	M 21	Construction Project Four
	W 23	AS3 Troubleshooting Groups
	M 28	AS3 Troubleshooting Groups
	W 30	Peer Review Critique Project Four

May	M 5	Individual Critique By Request
	W 7	Individual Critique By Request

Final Exam	Tuesday, May 13th, 8:00 – 9:50 am
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ART4908 SPRING 2008 PROJECTS

Group Project 1: Interactive design process and interface research project

Readings: As a group, read Norman's article and discuss the steps.
Why is it important? Answer the question, "who cares?"

Research: Choose one type of interface to explore in this project. Each student will find their own example of this kind of interface (discuss with group members, don't choose the same object, machine, etc.).

Individual Photography + Mapping the Action Sketches: (1.) Each student will take digital photographs of the actions required to 'interface' with the device. Include the actions required of the user. These steps will be used later in an animation exercise, so take a number of "stop-action" kind of photos. (2.) Draw a flow chart, diagram, chart, or map of the user experience. Include "machine" responses or actions.

Written interface report: Now that you have mapped the steps, write them in detail. Use Norman's article as a guide to describe the action of the machine and the action of the user.

Individual Electronic Illustration in Flash: Scan in at least six of your process photographs. Make outline drawings in flash. Later we will use the drawings to animate. Think of these as "wire frame models". Use only black and white and no fills. You should vary line thickness to give the viewer a visual cue as to the nearness or farness-away of objects. You should use a timeline to organize your drawings into one single Flash file. Publish your file. Put a copy of your file and your SWF in our Class Folder on the Course Server. Keep an additional back-up of your file in a separate place.

Small Group Troubleshooting: We will review the Flash files in groups. Make suggestions for improvements.

DUE on February 13th

Project 2: Tutorials

Complete ALL of the tutorials in the Hands-On-Training book.

Save one file for each entry in the table of contents (save even if they say you don't have to).

Upload a folder of your work to the server.

Make your own back-up files.

Discuss solutions and solve problems.

DUE on February 13th

Project 3: Frame-by-frame animation

Scan + Trace images

Assemble the timeline

Develop "in-between" drawings

Fine tune pace

DUE January 27th — Small Group Critique

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Project 4: Shape or motion tween animation

Create an original animation using both shape and motion tweens. For this project you may use color. If you choose, you may continue to work with imagery from the previous project but do not use existing animations in any form. A simple idea for this project would be to animate how something works, such as an electric toothbrush or an electronic can opener. You need to create original illustrations, so it is suggested that you use the same process as the previous project (photograph, scan, trace). This will allow you to create accurate drawings and your work will have the potential to look highly professional. Another approach to this project is to develop a banner advertisement or a short narrative sequence or a cartoon. Remember, your drawing skill will be assessed along with your skill with the software. There is no minimum number of frames, but there is a time limit: keep your animation under 30 seconds. You may experiment with changing the frame rate, but it is suggested that you try to work within the standard 12 frames per second.

Research + Exploration

Concepts

Sketches

Keyframes + Sequencing

Electronic Layout

DUE March 19th — Critique

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Project 5: Interactive project: narrative, game, procedure or process

The final project introduces you to ActionScript 3.0 which gives the power of interaction to ordinary animation. You will give the user control over the pace, direction, and viewing order of your project. **Websites, games, interactive books, process animations** (how to do or make something), and **educational materials** often incorporate interactivity. You may choose one of those five approaches for your Interactive Project.

[Examples: An interactive web site could be your personal portfolio site.

A game could be Snake or a matching game for children.

An interactive book could be a version of the original Winnie the Pooh story.

You could illustrate how Godiva Chocolate is made and packaged.

You could teach 7th graders how clouds form lightning, thunder, and rain.]

Computerized animation is a great tool for demonstrating things that can't be seen or experienced in person, like weather formation, atoms, chemistry, and scientific processes, and how to do things, like assembling a saxophone. Keep this in mind when you choose your subject. Interactivity is a great tool for letting a user control his/her learning experience, and for giving an individualized experience to gamers and web site users. For instance, you can control the look and function of your interface at many websites, or develop your own avatar or game character. Giving the user control over choices may put game levels in an unpredictable order, or present news from a geographic location, or a child might creatively choose from among a range of 'color crayons' to 'draw' with. You will use some form of interactivity in your project, which could include timeline control, movieclip control, buttons, dynamic text, sounds, video, etc.

Some important notes: (1) You will need to put all your knowledge to work in this project, from the tutorials, to the interactivity project, to your own design aesthetics. Team up with each other. (2) You will feel lost. You won't have any idea how to make your project work. Don't worry about what you don't know—focus on what you do know: you know how you want your project to function, what it should do, what the user does and how the interface should respond. Just knowing that will help us choose the ActionScript that will make it work. (3) Don't wait for the professor to get around to you — Ask for help immediately, don't waste time. Ask your peers and ask your friends too. (4) This subject matter is hard. It demands that you become a problem solver. But this is really **AWSOMELY GRATIFYING** when you get it to work! (Prepare to cheer out loud—honestly, its that aggravating AND that great!) (5) In order to make something fun, it is sometimes necessary to have fun in the process. Please do.

Research + Exploration + Concepts

Users + Mapping Actions

Gather content + Electronic Layout

Edits + Iterative Design Process

DUE April 14th Mid-Point Critique

Edits + Iterative Design Process

Construction Project Four

AS3 Troubleshooting Groups

AS3 Troubleshooting Groups

DUE April 30th Peer Review Critique Project Four

Individual Critique By Request

Individual Critique By Request

DUE Final Presentation Tuesday, May 13th, 8:00 – 9:50 am