

Course Syllabus

Course Number: GWDA253

Course Title: Authoring for Interaction

Class Meetings:	Section A, Tuesday, 7:30-11:30am0, Rm. 237 2900 MAIN Bldg. The quarter begins on Monday, 07/14/2014 and ends on Saturday, 09/27/2014.
Session/Year:	Su14
Instructor Name:	Dr. Pete Markiewicz
Email Address:	pmarkiewicz@aii.edu
Phone:	Comeon, it's the 21st century, dude
Class website:	http://www.plyojump.com/courses
Office Hours:	Wednesday, 7:30-11:30am, in the Tutoring Center, 2950 building Rm. 321 (near Library).). Monday, Tuesday, Wednesday 11:30-12:30 are available on special request (you MUST send an email to set up and confirm).
Contact me at:	pindiespace@gmail.com
Facebook, LinkedIn	Username: "pindiespace" or Pete Markiewicz

Authoring for Interaction

Course Description:

Students combine experience design concepts with advanced programming solutions. Emphasis placed on learning object-oriented approaches to developing dynamic/ reusable rich media modules combined with data applications.

Course Focus: *This course introduced the interactive side of web page design, using the web's standard interactive programming languages, JavaScript and ActionScript. This includes application of JavaScript-based frameworks (e.g. JQuery) along with elements of User Experience or Experience Design. Students will create a game or "gameified" website that relies on the interactive features of JavaScript to create an interactive and collaborative "User Journey."*

Credit Values: 3 Credits

Learning Outcomes:

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

Define interactive systems

- Define the difference between static and dynamic systems
- Describe interactive systems in terms of Experience Design
- Define the tools to create web-based interactive experiences
- Understand the goals of data & scientific visualization

Create Interactive deliverables

- Define the deliverable set used in interaction design
- Develop a design document incorporating interactive deliverables

Create an interactive system

- Apply client-side web languages (e.g. JavaScript, ActionScript) to create web experiences
- Incorporate Progressive enhancement theory into the interactive system.

Course Focus Competencies:

- Understand how JavaScript frameworks and libraries are used in user interaction
- Apply an understanding of JavaScript to create user-driven, interactive application

Course Prerequisite(s): GWDA223 Intermediate Web Page Scripting

Course Length:	11 Weeks
Contact Hours:	44
Lecture:	2 Hours per week
Lab:	2.4 Hours per week
Credit Values:	3 Credits

Quarter Credit Hour Definition:

A quarter credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than:

- (1) One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for 10-12 weeks, or the equivalent amount of work over a different amount of time; or
- (2) At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution including laboratory work, internships, practical, studio work, and other academic work leading to the award of credit hours.

Text #1 (REQUIRED): Don't Make Me Think Revisited: A Commons Sense Approach to Web Usability by Steven Krug: New Riders, 3rd ed (2014), ISBN-10: 0321965515, ISBN-13: 978-0321965516, <http://www.amazon.com/Dont-Make-Think-Revisited-Usability/dp/0321965515/>

Text #2 (OPTIONAL): Rocket Surgery Made Easy: The Do-It-Yourself guide to fixing common usability problems by Steve Krug. New Riders, 1st ed (2009): ISBN-10: 0321657292, ISBN-13: 978-0321657299
<http://www.amazon.com/Rocket-Surgery-Made-Easy-Do-It-Yourself/dp/0321657292/>

Text #3 (OPTIONAL): About Face: Essentials of Interaction Design, Alan Cooper, Wiley (2014): ISBN-10: 1118766571, ISBN-13: 978-1118766576
<http://www.amazon.com/About-Face-Essentials-Interaction-Design/dp/1118766571/>

TEXT #4 (OPTIONAL): *The Element of User Experience, (2nd Edition)*. Jesse James Garrett, **New Riders/Voices that Matter**, ISBN-10: 0-321-68368-4.

Method of Instruction:

Lecture and lab, including online research.

Materials and Supplies: Backup media (CD-ROMs or thumbdrives)

Estimated Homework Hours: # 4 Hours per week

Technology Needed: Student and/or ISP accounts allowing upload of websites.

Digital Bookshelf & Course eBook:

If your class uses an electronic book, "ebook", your required textbook for this course is delivered via electronic format. You do not need to purchase a hardcopy textbook. You will be able to access your eBook via eCompanion (<http://myaicampus.com>) beginning no later than the first day of class. Once you

have accessed your eBook via eCompanion, you can then also choose to download the eBook to a personal computer using the Digital Bookshelf software (<http://vitalsource.com/downloads>). Please refer to the Ai Digital Bookshelf Student User Guide, available in eCompanion, for specific instructions.

To start using your eBook, enter the eCompanion site for this class. Click on the “Digital Textbook” link on the left-side navigation bar. Then, click on the link for the book.

For support using the Digital Bookshelf, contact Campus Support at 1-866-642-2771 or campus_support@aii.edu. This support group is available SEVEN DAYS A WEEK from 7:00 AM – MIDNIGHT Eastern Time.

Grading Scale:

All assignments must have clear criteria and objectives to meet. All students shall be treated equitably. It will be that student’s right to know his/her grade at any reasonable point that information is requested by that student. The criteria for determining a student’s grade shall be as follows (on a percentage of total points basis):

A	100-93
A-	92-90
B+	89-87
B	86-83
B-	82-80
C+	79-77
C	76-73
C-	72-70
D+	69-67
D	66-65
F	64 or below

Process for Evaluation:

Class Participation	10%
Assignments and Exercises	50%
Mid-Term Project/Examination	15%
Final Project/Examination	<u>25%</u>
Total	100%

***PLEASE NOTE: SHOWING UP TO CLASS AND DOING ALL ASSIGNMENTS, WITHOUT PROGRESS, DOES NOT CONSTITUTE A PASSING GRADE.**

Student Evaluation/Grading Policies:

- Class time will be spent in a productive manner.
- Grading will be done on a point system.
- Points for individual activities will be announced.
- All work must be received by the set deadlines.
- Late work receives a grade of zero.
- On-time projects may be redone with instructor approval.
- ABSOLUTELY NO WORK WILL BE ACCEPTED AFTER THE FINAL CLASS MEETS WEEK 11.

Classroom Policy:

- No food allowed in class or lab at any time. Drinks in re-closeable bottles allowed in classroom.
- Edible items brought to class or lab must be thrown out.
- If student elects to eat/drink outside class or lab door, missed time is recorded as absent.
- Attendance is taken hourly. Tardiness or absence is recorded in 15-minute increments.

- Break times are scheduled by the instructor at appropriate intervals.
- No private software is to be brought to lab or loaded onto school computers.
- No software games are allowed in lab (unless in course curriculum).
- Headphones are required if listening to music during lab. No headphones are allowed in lecture.
- Any student who has special needs that may affect his or her performance in this class is asked to identify his/her needs to the instructor in private by the end of the first day of class. Any resulting class performance problems that may arise for those who do not identify their needs will not receive any special grading considerations.
- Cell phones may NOT be used in the classroom. If you have an emergency that requires you to take a call during class, you MUST inform the instructor before class begins, and step outside the room to take the call or text message.

School-wide Attendance Policy:

Students who do not attend any classes for fourteen (14) consecutive calendar days and fail to notify the Academic Affairs Department will be withdrawn from school. In addition, the student may be involuntarily withdrawn at the discretion of the Academic Director, and with the approval of the Dean of Academic Affairs, at any time.

Course Attendance Policy:

Successful completion of a course is dependent upon regular attendance in the classroom. Critical information is delivered through lecture, critique and student participation. Students are expected to be on time for each class and to stay for the entire class period. Attendance is mandatory. There are no excused absences. All missed class time must be recorded as such.

- If a student accumulates a total of two (2) full class absences during an academic quarter, his or her grade may be adversely affected.
- If a student accumulates a total of three (3) full class absences during an academic quarter, he or she may receive an F grade for the course.

Veteran Affairs Course Attendance Policy

Students who receive VA educational benefits are required to pursue each of their courses to be eligible for benefits. In order to receive the full benefit allowance the student must attend all classes in which the student is registered throughout the academic term at the campus.

- A student who is absent from a particular course for a period of 14 consecutive calendar days will be considered not pursuing the course.
- At the end of a quarter, a student must complete their final assignment or take their final exam (these dates must be documented) or not receive a grade of W, WF or an unearned F, or their last date of attendance will be provided to the VA.

Withdraw from a Course:

In order to withdraw from a course (that is, receive a grade of "W"), a student must meet with his or her Academic Director before noon on the Friday of week 9.

Academic Dishonesty:

Students are expected to maintain the highest standards of academic honesty while pursuing their studies at The Art Institutes. Academic dishonesty includes but is not limited to: plagiarism and cheating; misuse of academic resources or facilities; and misuse of computer software, data, equipment or networks.

Plagiarism is the use (copying) of another person's ideas, words, visual images or audio samples, presented in a manner that makes the work appear to be the student's original creation. All work that is not the student's original creation, or any idea or fact that is not "common knowledge," must be documented to avoid even accidental infractions of the conduct code.

Cheating is to gain unfair advantage on a grade by deception, fraud, or breaking the rules set forth by the instructor of the class. Cheating may include but is not limited to: copying the work of others; using notes or other materials when unauthorized; communicating to others during an exam; and any other unfair advantage as determined by the instructor.

Students accused of academic dishonesty will be brought before a Student Conduct Committee. If the committee determines that there has been a violation of the Academic Dishonesty policy, the student will automatically fail the class and, depending on the severity of the infraction, may face further disciplinary action up to and including suspension from classes or expulsion from school.

Disability Policy Statement:

It is our policy not to discriminate against qualified students with documented disabilities in our educational programs, activities, or services. If you have a disability-related need for adjustments or other accommodations in this class see the Director of Student Affairs located on the 3rd floor of Building 2950.

Student Assistance Program:

The Talk One2One is a pre-paid service, provided through The Art Institute of California – Los Angeles, that offers a menu of services and support accessible 24/7 to assist the student in attaining balance and academic success, including: counseling, budget and debt assistance, information and resource referrals, consultations, and new parent coaching. If you are in need of services, contact Talk One2One at 888-617-3362.

Tutoring Center:

Full-time faculty will be available during office hours to share knowledge, engage in dialogue and/or give advice and guidance to our student body in the Student Success Center. Students may meet with full-time faculty during their office hours by scheduling an appointment with the faculty member.

Commitment to Excellence – Reading/Writing/Comprehension:

While the principal goal of this course is the acquisition of knowledge in the subject area, students should be aware that The Art Institute of California requires that research on a particular topic and clear and effective writing be an integral part of the learning process.

Media Policy:

All media (images, videos, audio, etc.) used for assignments must be legally obtained, and use of that media must not infringe on any copyrights. Violations of this policy in any assignment will result in a failing grade for that assignment. Documentation of media sources will be required for each assignment.

Communication:

We will use eCompanion for communication during the term. It is your responsibility to check the system and your email daily and be prepared for possible changes and announcements. Use the eCompanion network to get homework assignments and to contact your classmates for notes and details if you miss a class. Homework will be turned in during class or through the eCompanion dropbox. Late homework must be turned in to the correct dropbox in eCompanion to be graded.

Library Assignment:

All students will need to utilize the Library for research and reference throughout the quarter. The Library is a valuable source for finding design ideas that will be needed for this course, i.e.: inspiration and design fundamentals for mid-term and final projects; locating popular trends in design, illustration and photography; referencing past award winning designs which may be used as a guide; identifying benchmarks or referencing competent design works.

Student Art Work:

All student work, which has not already been returned during the quarter, will be available for pickup no later than 5:00 pm, Monday of the first week of break. Any work NOT picked up by that date and time will

be discarded unless other arrangements have been made. Students must take personal responsibility for their work.

Additional Policy notes for this Instructor:

1. **If you don't understand, come to office hours...**
2. **Office hours are not a second lecture** – they are designed to give you additional help for problems you didn't understand in class.
3. **You are completely responsible** for your own performance in class.
4. **Students will complete all work** in the syllabus. If there is a school holiday, you are still expected to complete assignments for that week.

Course Outline:

Monday, Sept. 3rd is a Campus Holiday. No classes are scheduled.

Week/Day	Topics
	Intro to Interaction Design
1	<p>LECTURE: Syllabus review. How Interaction Design differs from Graphic Design. The user as co-collaborator in design. Storytelling. Emotional Design. User Journeys. History of web interactivity. Differences between UX, Interaction Design, and User Interface (Ui). Games, Gameification and Interaction Design. Data and Scientific Visualization.</p> <p>LAB: Explore Interactive Design library at the Buxton Collection. Analyze an interactive device like a vending machine, payment scanner, gas pump (group). Create a basic website with standards-based HTML, CSS, and JavaScript. Create a simple JavaScript program in a 2-column layout. Explore online JavaScript consoles (jsFiddle, JS Bin, Firebug) and internal console objects in major browsers. Create an Flash/ActionScript project with AS3 classes.</p> <p>HOMEWORK: Reactivate your online JavaScript training.</p>
	User Journeys and Interaction Patterns
2	<p>LECTURE: Interaction Patterns as Design Patterns. Understanding users. What is a User Journey? User play and interaction. Discovery vs. learning. Defining context in scenarios. Creating a journey from concept, personas, scenarios, storyboards. Journeys to tasks to features. Basic Interaction Design Patterns. Coding interaction patterns.</p> <p>LAB: Set up boilerplates in JavaScript, ActionScript, UnityScript and Swift. Develop a User Journey (group) via Persona, Scenario, Storyboard. Students develop concept for their own work based on group User Journey.</p> <p>HOMEWORK: Concept (Creative Brief). JavaScript, ActionScript, CSS3 Tutorials I. Develop Concept Deliverable for your Final Project.</p>
	Interaction Patterns in Detail
3	<p>LECTURE: From mental models to interface. Affordances. Interface design patterns. Progressive enhancement and mobile first. Touch vs keyboard and mouse interaction patterns. Animation in interaction design. Process Flowchart. User Flows. Documenting interactions, behaviors, and data transfers with annotations Motion as information and confirmation. Developing Interaction Pattern deliverables (Flowchart and User Flows).</p> <p>LAB: Students present their individual Concept (Creative Brief). Students create a User Journey Deliverable. Users research Interaction Design Patterns. OOP programming of interactive systems (JavaScript & ActionScript).</p> <p>HOMEWORK:</p>

Create a draft User Journey for your Final Project. Develop Tasks to Features from User Journey. JavaScript, ActionScript CSS3 Tutorials II.

Interactive Prototypes

LECTURE:

Paper Prototypes. User Flow. Process Flowcharts. Code frameworks for interactive design. Mockups in Flash and HTML5. The Iterative Design Process.

LAB:

- 4 Students present their Tasks to Features Deliverable. Students develop a Process Flowchart. Based on their draft, they develop User Flows deliverable using Rapid Visualization techniques. User Flows are then converted to Paper Prototypes.

HOMEWORK:

Finish your second iteration of your User Journey. Complete Process Flowchart. Complete Paper Prototype. JavaScript, ActionScript , CSS3 Tutorials III.

MIDTERM, Project Presentation I

LAB:

5 Students present their User Journey, Tasks to Features, Process Flowchart, User Flow, Paper Prototype. Students Test their Paper Prototype with each other (Peer Grading).

HOMEWORK:

Students begin refine User Flow with animated elements, create boilerplate for Code Prototype.

OOP Programming, Interaction Frameworks and Best Practices

LECTURE:

6 Midterm review. Code formatting review. Unobtrusive Javascript. Calling scripts using the DOM and XSS. JavaScripts objects in detail (literal, by function, new operator). Interactive libraries in JavaScript.

LAB:

Working with variables, conditionals, loops, arrays and logic. OOP Programming II (functional game). Students refine their User Flow to include transitions and motion graphics, including Interaction Patterns.

HOMEWORK:

Finish Animated User Flow. Begin converting to a Code Prototype.

Data Visualization I

LECTURE:

7 Data visualization in interaction design. Big data and interaction. Data visualization in JavaScript. Common data visualization libraries.

LAB:

Students present their completed Animated User Flow. Students create a visualization of complex data using d3 library. Students work on final project, creating a first-pass (static) Code Prototype from their Animated User Flow.

HOMEWORK:

Continue working on Code Prototype for presentation.

Servers, Data APIs, Visual Design Theory

LECTURE:

Data APIs and visualization. Ajax design patterns. Perception and Gestalt Theory in interaction design.

LAB:

- 8 Students present their Code Prototype for the second time. Students experiment with Ajax and data APIs.

HOMEWORK:

Students work on their final project, adding animation and touch to their Code Prototype. GET USERS FOR TESTING.

USER TEST 1: User Testing and Analysis

Lecture:

9 Analytics. User Testing methods.

	<p>LAB: Students conduct tests of their Prototype (which should incorporate more advanced interaction, e.g. touch, animation, transitions) using non-class members.</p> <p>HOMEWORK: Complete specified JQuery tutorials. Students complete their Code Prototype.</p>
	Cross-Platform Interaction
<p>10</p>	<p>LECTURE: Linking libraries and polyfills. Mobile app development. Unity3D and game systems. Non-standard input devices (remotes, game remotes, non-touch motion).</p> <p>LAB: Work on final project Prototype, adding cross-browser compatibility.</p> <p>HOMEWORK: Complete final project Prototype</p>
	FINAL PROJECT PRESENTATION
<p>11</p>	<p><i>Lecture: None</i></p> <hr/> <p><i>Students present final project.</i></p> <hr/>