Code Syllabus

ATLS 3000-020/021
Tuesdays and Thursdays, 9:00–10:50 a.m.
ATLS 1B31
Instructor: Joel Swanson joel.swanson@colorado.edu
Office Hours: Tuesdays & Thursdays 11:00 a.m.–12:30 p.m. ATLS101

PRE-REQUISITES
None officially, although it is recommended that you have taken: ATLS2100, *Image* and ATLS2300 *Web*. If you passed *Web* it is assumed that, you understand the basics of HTML, CSS, and JavaScript and that you can build a website from scratch (hand coded) and post it to a server (which you will need to know how to do for this course).

A basic understanding of college level algebra, geometry and trigonometry is recommended for this course.

COURSE DESCRIPTION
(This course) explores computation as a powerful tool for creative design and expression in a project-based studio environment. Students learn the fundamentals of creative coding, computational thinking, and object-oriented programming. Hands-on topics include generative art and design, interactivity, animation, and visualization.

COURSE OBJECTIVES
- That you understand and appreciate what it means to "think computationally"
- That you are comfortable using programming as a tool for design and creative expression
- That you understand the fundamentals (syntax, structures) of programming
- That you are able to think creatively and conceptually about your work, in whatever discipline or field that may be.

PRO TIP: If you find yourself struggling in this course, or falling behind, let me know as soon as possible as waiting will only compound the problem.

If you are familiar with programming and are concerned that this class won't be beneficial and/or challenging for you, please see me so that we can ensure that this course is a useful experience. This class isn't just technical, it is also about using this technology in creative, conceptual, and compelling ways (which is why this course is 3000 level).

COURSE WEBSITE
For this class, we will be using D2L. On this site you will find the course syllabus, schedule, assignments, resources, and grades. This is also where you will submit your exercises and projects.

WHAT WE WILL DO
This class is a mix of technical instruction (both inside and outside the classroom), readings, viewings, lectures, workdays, and critiques. The course is structured around two major projects, however, in order to make the best projects possible, we have a lot of technical content to cover first. If you look at the schedule, you will notice that the bulk of the technical instruction is front-loaded in the first half of the semester. The latter half of the semester we will spend more of our time working on projects and critiques.

REQUIRED TEXTS

None, but I will provide various readings throughout the semester as PDFS. I encourage you to print them out and keep them in a folder or binder as a way to organize the readings from the class. Viewings and Readings are to be completed BEFORE the day that they are listed on the schedule.

However, if you want a book as a supplement: Getting Started with p5.js, Lauren McCarthy
And here is an additional resource with video tutorials: Kadenze p5.js course

COURSE WEBSITE
For this class, we will be using D2L. On this site you will find a course calendar, assignments, resources, and grades. Additionally, this is where you will submit your labs and projects.

PAIR PROGRAMMING
For the first half of the semester, we will be learning about code. On a typical day, you will come to class having watched a series of videos that I previously assigned. I will provide a list of concepts you should watch for in the video. You will then come to class, and in randomly assigned pairs, collaboratively work on a "Pair Programming Challenge" that utilizes the concepts from the tutorials. You will work together on one computer, but will switch "drivers/navigator roles" at some point during the challenge. We will then dig a bit deeper by looking at other examples of the core concepts.

As you can see, it is important that you come to class having watched and digested the tutorials so that you and your partner can successfully complete the challenge.

http://www.realsearchgroup.org/pairlearning/videos/pairprogramming_students.mov

GRADES

Category		Points	Evaluation Method
Project 1	(Data Visualization)	40	multi-staged and in class critiques
Project 2	(Game)	40	multi-staged and in class critiques
Pair Programming Challenges		5+*	quantitative
Forum Participation		5	quantitative and qualitative
Online Portfolio		5	quantitative
One-on-One Meetings		5	quantitative
Technical Benchmark:		0**	in class exam

*you can earn extra points for going over and above the requirements of the pair programming challenges
**you will not pass the course if you do not successfully pass the benchmark

PROJECT EVALUATION RUBRICS
All major projects will be evaluated according to the following categories. Detailed rubrics will be provided for each project, but my general method for evaluation creative projects is:

● Technical (33%)
● Design/Aesthetic (33%)
● Creative/Conceptual (33%)
● 1% remainder: discretionary point

GRADING SCALE
A = excellent work
B = above average work

C= average or competent work
D = below average work
F = unsatisfactory work

In order to counteract grade inflation, I do not give out A's easily. If you turn in all your work on time (and if it is satisfactorily completed), and if you attend class and participate, you are ensured a C. A's and B's are reserved for students who excel beyond average and competent work.

TECHNICAL BENCHMARK
Towards the middle of the semester we will have a technical benchmark exam. This will be an in-class exam that will test your general knowledge of programming as well as the syntax of p5.js. This exam isn't factored into your final grade, however you must pass this exam in order to pass the course. You can retake the exam until you pass it, up until the final week of classes.

This benchmark is nothing to be afraid of, and will easy to pass for those of you who come to class, do the tutorials, pay attention, and ask questions when you need clarification.

LATE WORK
Late work will not be accepted. If you have not finished a project, you will need to show what you have to avoid getting a "0" for the project.

ONLINE PORTFOLIO
At the end of the semester I want you to turn in a website with links to all your work in the class. This includes major projects, pair programing challenges, and other assignments. I'm not going to grade this on design, but on completeness, so make sure you save copies of all your work.

COURSE CONTENT
In this class I reserve the right to show a broad range of course materials, some of which may be offensive to some people. It is not my goal to intentionally offend anyway, but should you feel offended by something you have seen or heard, I would appreciate you staying to be part of a dialogue as I welcome your perspective. If you feel that you cannot stay, feel free to excuse yourself from the classroom as discretely as possible.

PROJECT CONFERENCES
This class is organized around two major projects. You are required to meet with me (at least) twice during the semester to discuss your ideas and progress on these two projects. I am not going to assign a specific time for you to meet with me (e.g. rough draft stage) but I encourage you to schedule a time to meet with me when it will be beneficial to you. For most students, this is either in the early conceptualizing stages or in the storyboarding / rough draft phase.

IN CLASS WORK/OUT OF CLASS WORK:
A.K.A Give someone a fish vs. teach them how to fish
I want to use in-class time as effectively as possible. To be blunt, technical demos during class are a waste of your time, therefore the bulk of the technical instruction will happen outside of class time via assigned readings, viewings, and tutorials. This is to allow you time in class to PROGRAM, and get help if you get stuck.

This approach will also help you become familiar with the vast amount of resources available to you, so that you can continue to learn technical topics after this class has concluded.

TECHNOLOGY

Bring your own laptop! The software we will be using is free and easy to install, so working on your own laptop will make things much easier for you!

NEED TO KNOW
With each reading and/or viewing, I will offer a link with a list of concepts that you should watch out for and understand. You should come to class with a general understanding of the concepts on the list as we will build upon those concepts for the Pair Programming Challenges. All readings and viewings should be completed before the day that they are listed on the schedule.

E-MAIL
You must use your Colorado.edu E-mail account for this course. Please check your E-mail and the class website regularly. I will notify you of all class cancellations and scheduling changes via the class website and/or e-mail. It is my goal to respond to all E-mails within 24 hours. If I fail to reply within 24 hours, feel free to resend.

Also, do your best to send me E-mail from your Colorado.edu account. I am not allowed to respond to non Colorado.edu E-mail accounts.

For the sake of efficiency (and sanity), I only check class-related E-mail during certain times during the day, typically in the late afternoon.

ATTENDANCE
Attendance will be taken in this class and can negatively affect your final grade. You are allowed three absences* after which your final grade will be lowered by a letter grade for each additional absence. Note that repeated and/or significant tardiness will be considered as absences.

All absences fall under these three absences (e.g. illnesses and injuries, oversleeping, vacations, job interviews, ski-days, family obligations and situations, etc.) so it isn't wise to use them all at the start of the semester. Exceptions will be made for religious holidays, severe illnesses, and prolonged family emergencies.

TECHNICAL SUPPORT
From past experience, debugging code (or figuring out why the code isn't working) is one of the major challenges in this course. One of the best ways to become better at debugging is to debug! For this reason, we are going to use the discussion feature on D2L as a way to get and give help as we move into the second half of the semester. If you have a technical question or a bug, post it to the forum on D2L. The rest of us will do our best to help you out. Your activity in helping others will be the metric for the "Forum Participation" portion of your grade.

TALENT VS. HARD WORK This is a gross generalization, but in western culture, we tend to value talent, in the east, hard work. Success is a mixture of both; they are symbiotic. Sure, someone who is naturally gifted in math won't have to work as hard in Calc 1, but that doesn't mean that someone who isn't as "naturally" talented won't succeed, they just have to work harder. What does this mean for you? We often gravitate to things we are good at and shy away from things that are difficult or challenging. This class might come easily to you, or it might be a challenge, but no matter who you are you can be successful!

CODE AND PLAGIARISM

In this class, we will use other people's code as a way to learn, and you are encouraged to look at and play with online examples and tutorials. If you use someone else's code in a project or lab, you are required to give credit to the author of that code in the comments. **Turning in someone else's code as your own is considered plagiarism and will be dealt with according to the University's plagiarism policies.**

When using other people's code:
- No more than 20% of your lab or project can be code snippets from other sources.
- You must give a citation in the code comments for all code from other sources.
- You must be able to explain in detail all the code that you use from other sources.
- Failure to meet these guidelines will result in a F for that lab or project.
- If in doubt, ask me!

DIGITAL DISTRACTIONS

Part of learning how to be an adult is learning how to manage various digital distractions such as texting, E-mailing, and using social media. I am not going to prohibit these activities because you need to learn how to integrate these tools into your life, and prohibitions will not help you learn how to manage these activities professionally. However, during class-time, I will ask that you refrain from texting, checking your E-mail, and using social media, as it creates a distraction for you, and more problematically, for your classmates. In the event that these activities become problematic, I reserve the right to amend this policy.

CRITIQUES

I highly value critiques and take them seriously. Even if your project is not completed, it is required that you come to class to offer feedback on your classmates' projects. It will negatively affect your project grade if you are not present for critiques.

Tips for effective critiques:
- Absolutely no "it's cool" or "I like itt" comments. It might be cool, but why it is cool? Comments must have substance and depth.
- Be descriptive: describe what part of the project you're talking about rather than commenting on the thing as a whole.
- Be specific: tackle specific issues about the project / trouble shooting.
- Be critical: there is little in the world that we like every feature of and that's ok. (We will critique a corporate project first to get in the groove)
- Be nice: this is a crit of a project not a person.
- Be articulate: Use the terminology we've learned in class.

PARTICIPATION

Being "present" means that you have completed all the required reading, viewings, exercises, and assignments before class begins, and that you arrive to class on time. Being present also means that you are mentally and physically engaged with the class.

My expectations of you:
- You can manage your time well
- That you will respect your classmates and the learning environment
- That you are committed to your education and that you won't make excuses

● That you attend class regularly and arrive on time ready to fully participate

I understand that as college students you are extremely busy and over-extended. But please realize that your behavior affects the learning environment and do your best to avoid causing distractions and disruptions.

I believe strongly that a classroom experience should be compelling, challenging and relevant. I also believe that we should take full advantage of being with each other in a physical space. I pledge to you my intent to create the best classroom experience that I can. I will be fully present for you, I will be highly prepared, I will be flexible and responsive to your questions and interests. I will know your names and your concerns. I will begin each class on time.

In exchange, if you are going to commit to this class, you need to fully commit. This means taking responsibility for your own learning experience, and as well as the experience of your peers.

ACCOMMODATION FOR DISABILITIES
If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu. If you have a temporary medical condition or injury, see Temporary Injuries guidelines under the Quick Links at the Disability Services website and discuss your needs with your professor.

RELIGIOUS OBSERVANCES
Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, (*insert your procedures here*).
See the campus policy regarding religious observances for full details.

CLASSROOM BEHAVIOR
Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior and the student code.

SEXUAL MISCONDUCT, DISCRIMINATION, HARASSMENT AND/OR RELATED RETALIATION
The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the OIEC website.

HONOR CODE

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [academic integrity policy](#) of the institution. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council(honor@colorado.edu; 303-735-2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at [honorcode.colorado.edu](#).

By enrolling you signify your awareness and understanding of the policies contained within this syllabus and your agreement to conduct yourself in accordance with these policies.