ATLS 2400: Code (ATLS 2519-420)
Fall 2015

MEETING TIMES
Mondays & Wednesdays
1:00 - 2:50 pm
ATLS 1B25

INSTRUCTOR
Brittany Ann Kos
brittany.kos@colorado.edu

Office Hours:
Wednesday 3-4
Friday 12-1
ATLAS 234

I am also available by appointment

REQUIRED MATERIALS
Portable Storage Device
Examples: USB Jump Drive, Firewire Hard Drive, iPod, etc. for saving and backing up your work.

You are given 1GB of server space, but you still need to backup your work. Lost and/or corrupted work is not an acceptable excuse for late work.

REQUIRED TEXTS
Learning Processing: A Beginner's Guide to Programming Images, Animation, and Interaction 2nd Edition
Daniel Shiffman
978-0-12-364443-6

This book is available in the CU Bookstore and online. You must have this book by the second day of class to avoid falling behind.

ATLAS HELP HOURS
Sterling Fraser
Sterling.Fraser@colorado.edu
ATLS 225

COURSE DESCRIPTION
The field of digital media continues to be propelled forward by technological advances, making it essential for artists, designers, and media producers to expand their technical knowledge and skillset in order to fully participate. This course introduces basic programming concepts and methodologies that will be applied to the creation and manipulation of information, images, animation, and sound. Students will gain the knowledge and skills needed to fully participate in digital media production.

My personal goal for you is that you will not only understand how to program, but you will begin to appreciate its relevance in today's digital media landscape.

This course is technical and can be challenging for many students. If you find yourself struggling, please 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.

COURSE CONTENT
In this class I reserve the right to show a broad range of course materials, some of which assume the audience to be adult in age and demeanor. 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.

COURSE WEBSITE
For this class, we will be using Edmodo.com. On this site you will find a course calendar, assignments, resources, and grades. Additionally, this is where you will submit your labs and projects. I will send an invitation to registered students after the first class.

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

CLASS STRUCTURE
This will be a semi-flipped classroom. Before class, I will assign readings and Khan Academy tutorials. You will be expected to have completed this "prep-material" before the start of class. The prep-material readings will introduce you to the new material and the Khan Academy tutorials will give you practice programming with these new concepts.

In class we will work through various "challenges" that will go a little more in-depth with the material and will solidify your knowledge of the material. You will be assigned a lab that will be a creative or practical application of the new material.

Monday & Wednesday
11–1:30 & 3:30–5:00
Friday 8–10

DIGITAL DISTRACTIONS

Part of learning how to be an adult is learning how to manage various digital distractions such as texting, E-mailing, and Facebooking. 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 Facebook, as it creates a distraction for you, and for your classmates. In the event that these activities do become problematic, I reserve the right to amend this policy.

ATTENDANCE

Attendance at all class meetings is required. You are responsible for knowing the material presented during class, even if you were not in attendance when the material was presented. Previous experience has shown me that students who do not attend class regularly often receive a failing grade and have to repeat the class the following semester.

You will not receive a grade for attendance and participation, however, I will be taking attendance in class everyday and not coming to class will adversely affect your grade. If you miss more than 3 classes (excused or unexcused), you will receive a 10% drop in your final grade and every day you miss after that will be another 5% drop. If you are present for only part of the class, this will count as a half day absence. Two half day absences will add up to one full day absence. If you come to class late this will count as a third day absence. Three third day absences will count as a full day absence.

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. You can find the details at www.colorado.edu/policies.

If you qualify for accommodations because of a disability, please submit a letter to me from Disability Services by the end of the first week of classes so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact info: www.colorado.edu/disabilityservices, 303-492-8671, Willard 322. That office also maintains guidelines about temporary medical conditions or injuries.

PARTICIPATION

Being present and participating is necessary if you want to do well in this course. Being “present” means that you have completed all the required reading, 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.

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.

IN-CLASS EXPECTATIONS

It is my expectation that each of you will be respectful to your fellow classmates and instructors at all times. In order to create a professional atmosphere within the classroom, you are expected to:

- Arrive to class on time
- Bring your laptop to class if you have one to participate in classroom activities. Please restrict laptop use to these activities only, no email, Facebook, Youtube, etc.
- Refrain from disruptive behaviors, such as texting or having conversations at inappropriate times during class
- Remain for the whole class; if you must leave early, do so without disrupting others
- Display professional courtesy and respect in all interactions related to this class

EVALUATION

Labs	20 points (8 labs x 1 pt & 6 labs x 2pts)
Projects	32 points (2 projects x 9 pts & 1 project x 14 pts)
Final Project	18 points (1 project x 18 pts)
Quizzes	9 points (3 quizzes x 3 pts)
Exams	20 points (2 exams x 10 pts)
Total	100 pts

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.

A = excellent work
B = above average work
C= average or competent work
D = below average work
F = unsatisfactory work

LABS/PROJECT EVALUATION RUBRIC

Labs and projects will be evaluated according to the following questions:

Technical (50%): Does the lab or project work? (Partial points can be given even if it does not fully work.) Does it reflect an understanding of the programming language and relevant concepts? Does it reflect a growth of understanding and an application of relevant technical principles?

Creative & Conceptual (50%): Does the project or lab approach the assignment creatively and uniquely? Does the project or lab present a foundational idea or question? Is it aesthetically interesting? Is the project engaging? Does it reflect creative and critical thought?

CRITIQUES

I take critiques very 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.

Critiques for projects 1 and 2 will be help on the week of Sept 21. Critiques for projects 3 and 4 will be held on the week of Oct 26. The critique for the final project will be held during the scheduled final time for the course, Thurs, Dec 17 at 7:30 pm.

EXAMS

There will be 2 (two) exams during the course of the semester. Both of these exams will be in-class. The midterm will be held on Mon, Oct 19, and the final will be held during the last day of class on Wed, Dec 9.

QUIZZES

There will be three unannounced quizzes throughout the course of the semester. These quizzes will cover the content of the lectures and readings. The purpose of these quizzes is to let me, and more importantly you, know how well you are absorbing and applying the concepts of the course. If you come to class, pay attention, complete the readings, and ask questions regarding things you don't understand, you will do fine on the quizzes.

READINGS

Readings are due by the day that they are listed on the schedule. We will be using these concepts that you will encounter in the reading in class and it is expected that you come to class prepared.

EXTRA CREDIT

There will be various extra credit opportunities that I encourage you all to participate in. Extra credit will be added to your final course grade at the end of the semester. There will be a maximum of 3% of extra credit granted (so extra credit will enable to you to jump from a B to a B+, but not a B to an A-).

ATLAS Events

ATLAS hosts a variety of events throughout the semester, such as the Speaker Series, TAM Workshops, and hosting guests. These provide great opportunities to learn more about Technology, Arts, and Media through different academic, industry, or artistic perspectives.

If you go to one of these events and want to receive extra credit, you will have to complete these two steps:

1. Take a selfie! Take a picture of yourself at the event to prove that you were present. You do not have to take a picture with the main speaker, but do include the part of the audience in the background.
2. Write a reflection paper. This paper should be 2 pages in length (1.5 spaced) and will include your thoughts, reactions, and reflections on the event. This should not be a summarization of the event, but should be your own perspective and opinion of what you thought or experienced.

Each event you attend will be worth 0.5 points towards your final grade.

Research Study

An ATLAS PhD student and good collegue of mine, Kara Behnke (kara.consigli@colorado.edu), is conducting a study on introductory programmers. Participation in this study is completely optional and up to your discretion. If you would like to participate, you will receive up to 3 extra credit points (the amount of extra credit points I will award will be determined by the quality of your submission). Here is the call to participation from Kara:

> Interested in learning more about computer programming? You may receive up to 3 points of extra credit by participating in an academic research study on learning introductory programming. To receive extra credit for this course, you will need to complete the following tasks:
>
> First, you will need to complete this survey. Your responses will be kept safe, confidential, and have no consequence on your grade.
>
> Next, choose one of the following websites that you will use to learn how to code.
>
> 1). Gidget
>
> 2). Khan Academy
>
> 3). GrokLearning
>
> 4). Scratch
>
> You are required to finish the website's recommended learning module or dedicate at least 10 hours of work to a project. Please submit a screenshot to Edmodo of your coding project or completed learning modules. After you submit this work, you will need to complete the post-test survey about what you learned.

CODE AND PLAGIARISM

You are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include cheating, plagiarism, academic dishonesty, fabrication, lying, bribery, and threatening behavior. Plagiarism includes using material from outside sources (e.g., the web) without clear identification and citation.

COLLABORATION POLICY

I support and encourage collaboration among students. I believe that students are most successful when they are working together to understand new concepts. However, the ultimate goal is that you fully understand the code you develop.

This class also has specific guidelines for what is considered collaboration and what is considered academic dishonesty. You must adhere to the University's Honor Code and this course's Collaboration Policy at all times. Violations of this policy may also include cheating, plagiarism, academic dishonesty, fabrication, lying, bribery, and threatening behavior.

You are expected to generate their own code for this class, but I am aware that through collaboration and using found code online often necessary. There will be a strict 10%-90% rule. 10% of any code you turn in can can be from an outside source, but 90% of the code MUST be original and written by you.

HOW TO CITE YOUR SOURCES

Examples (assuming // indicates beginning of code comment):

> // Modified version from https://github.com/Phhere/MOSS
>
> // Adapted from Learning Processing by Shiffman
>
> // Worked with Joe Smith from class to come up with algorithm for sorting
>
> // Received suggestions from stackExchange website (see http://….)

If you are using code directly from another source, you must say where that code begins and ends. For example:

> // Start code from stackExchange website (see http://….)
>
> // End code from stackExchange website (see http://….)

A good rule of thumb: "If it did not come from your brain, then you need to attribute where you got it."

Note: you do not need to cite if you are adapting code from the lecture slides or the required readings.

Certain homeworks may be required to be completed without outside resources (see course overview for details). In these cases it is your responsibility to know the extent of approved resources and use only those that have been specifically allowed. Use of outside resources in these cases would violate the collaboration policy.

OFFICIAL CU POLICIES

Religious Observances

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Please contact me before class regarding any absences or conflicts due to religious observances. See full details at http://www.colorado.edu/policies/fac_relig.html

Disability Services

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 under Quick Links at Disability Services website (http://disabilityservices.colorado.edu/) and discuss your needs with your professor.

Honor Code

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at http://www.colorado.edu/policies/honor.html and at http://honorcode.colorado.edu

Discrimination and Harassment

The University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working, and living environment. The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status in admission and access to, and treatment and employment in, its educational programs and activities. (Regent Law, Article 10, amended 11/8/2001). CU-Boulder will not tolerate acts of discrimination or harassment based upon Protected Classes or related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected Classes" refers to race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, or veteran status. Individuals who believe they have been discriminated against should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Student Conduct (OSC) at 303-492-5550. Information about the ODH, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at http://hr.colorado.edu/dh/

Behavioral Standards

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, culture, religion, politics, sexual orientation, gender, gender variance, 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. See policies at http://www.colorado.edu/policies/classbehavior.html and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code