

AET 310 FOUNDATIONS OF CREATIVE CODING

UID:

Meetings:

Location: DFA 4.112

Text: Learning Processing, Daniel Shiffman

Instructor:

Office Hours:

Abstract

A guide for expressing original ideas visually through code using the programming language and IDE Processing. Finding creative solutions to technical challenges.

Assessment

Challenges 1 - 6 are graded pass/fail for 4 or 5 points each, Challenges 7 - 10 are graded out of 15 points. Assignments are due by the start of class on the due date. The remaining 15 points of the final grade is based on professionalism which is earned by attending class during the scheduled meeting times and participating in discussions. Projects will be graded using the provided rubric.

No late work will be accepted. No incompletes will be given. If you feel you will not be able to complete all work on time, you should ask the instructor for a grade of Q or drop before the deadline for doing so passes.

Note: If you cannot attend class for any reason, please send an email and attach any class work as needed, and talk to your classmates to find out what you missed.

Classroom Policy

Devices

- Must be kept in silent mode unless an emergency notification is expected (please discuss this with me prior to class).
- Can be used for research and class note taking, but not for social media (unless related to class activities)

Food/Drink

- Food is not allowed in class.
- Drinks in closed containers are permitted but must be kept on the floor or out of sight when not in use.

Required Equipment

All students MUST have access to a portable computer. Either Mac or PC is fine.

Textbook

Learning Processing by Daniel Shiffman

Calendar

Week		Book
1	Course Intro Processing Basics	
2	Challenges and Assignments Demo 1: Shapes, Colors, and Animation LAB - Building Alien with Shapes	Chapters 1 - 3
3	Challenge 1 Due Demo 2: Variables, Loops, If-Else LAB - Building Alien with Variables	Chapters 4 - 6
4	Challenge 2 Due Demo 3: Functions, Objects, Data Types LAB - Make Alien into Object	Chapters 7 - 8
5	Challenge 3 Due Demo 4: Arrays, Algorithms, Debugging LAB - Minigame	Chapter 9
6	Challenge 4 Due Demo 5: Libraries and Sound LAB - Add Sound to Minigame	Chapters 10 - 12
7	Challenge 5 Due Demo 6: Images, Sprites, Video Lab - Review	Chapters 13 - 14
8	Challenge 6 Due Demo 7: Math and Transformations LAB - Processing Game	Chapters 15 - 16
9	Spring Break	Chapters 17 - 21
10	Challenge 7 Due Lecture: CC for M&S LAB	Bonus: 5pts Extra Credit for submitting the game to OpenProcessing.org
11	Demo 8: M&S Tool (Max/MSP ?) Discussion: Music & Sound LAB	
12	Challenge 8 Due Lecture: CC for P&L LAB	
13	Demo 9: Touchdesigner / Arduino Discussion: P&L LAB	
14	Challenge 9 Due Lecture: CC for Games LAB	https://unity3d.com/learn/tutorials/topics/interface-essentials https://unity3d.com/learn/tutorials/s/scripting (beginner only)
15	Demo 10: Unity / C# Discussion: Game Design LAB	
16	Challenge 10 Due	

Units of Study

- **Foundations**
 - Intro to Processing
 - Programming concepts
 - Multimedia concepts
- **Applications**
 - Solving problems and doing things with code
- **Systems**
 - Processing libraries
 - Other creative coding systems for:
 - Games, Projection & Lighting, Music & Sound

Process

We will work through demonstrations, textbook content, and a number of technical/creative challenges to learn about multimedia and interactive system programming.

Reference

A short list of useful resources for creative coding

- [Processing.org](https://processing.org) - main site for Processing
- [Processing.org](https://processing.org/tutorials) - tutorials
 - hello.processing.org - great starting point
- [Processing.org](https://processing.org/reference) - reference
- [Processing.org](https://processing.org/libraries) - libraries
- [Processing.org](https://processing.org/ide) - IDE reference
- [Learningprocessing.com](https://learningprocessing.com) - website for the textbook
- [Sketchpad.cc](https://sketchpad.cc) - an online processing editor
- [Awesome Creative Coding list by TerkelG on GitHub](#)

Class Attendance Policy

As detailed above, attending class during the scheduled meeting times earns professionalism credit. Credit is NOT earned for arriving late, leaving early, or failing to attend class meetings. If attending a scheduled class meeting is not possible, students are expected to promptly notify the instructor of extenuating circumstances.

Q Drop Policy

The State of Texas has enacted a law that limits the number of course drops for academic reasons to six (6). As stated in Senate Bill 1231: "Beginning with the fall 2007 academic term, an institution of higher education may not permit an undergraduate student a total of more than six dropped courses, including any course a transfer student has dropped at another institution of higher education, unless the student shows good cause for dropping more than that number."

University Attendance Policy: Religious Holy Days

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, I will give you an opportunity to complete the missed work within a reasonable time after the absence.

Documented Disability Statement

Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone). Faculty are not required to provide accommodations without an official accommodation letter from SSD. academic honesty University of Texas Honor Code The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Behavior Concerns Advice Line (BCAL)

If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit <http://www.utexas.edu/safety/bcal>.

Emergency Evacuation Policy

Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation:

- Familiarize yourself with all exit doors of the classroom and the building. Remember that the nearest exit door may not be the one you used when you entered the building.
- If you require assistance to evacuate, inform me in writing during the first week of class.
- In the event of an evacuation, follow my instructions or those of class instructors. Do not re-enter a building unless you're given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.