PROGRAMMING FOR ARTISTS
IDC 3500C • 15E3 / IDC 6505C • 15E4
Spring 2018 • credit hours: 3
FAC 306
Mon + Wed 6:15 - 9:10PM (periods 11 – E2)

CO-INSTRUCTORS:
Annemarie Poyo Furlong  apoyofurlong@ufl.edu
Lynn Tomaszewski
Instructor will respond to emails within 24 hrs

OFFICE: FAC 101   OFFICE HRS: Wed 5 – 6PM and by appt.

**Class announcements, homework assignments, critique dates, special events, class location changes, and extra credit opportunities are communicated via Canvas and via UF email. Please check Canvas and your UF email daily (before class) for updates.

COURSE DESCRIPTION
The goal of this course is to learn fundamental programming concepts enabling the digital artist to take full advantage of the range of computer-mediated interactivity. We will learn using the open source tool, Processing. The course will focus on the use of programming in the production of digital media artworks.

Through hands-on projects, readings, lectures, discussions, and critiques students will develop the skills needed to create interactive work. Students will use Processing to draw, process images, visualize information, and use software as an expressive and communicative medium.

Students will learn to write and compile programs using Processing's built-in IDE (Integrated Development Environment). Students will produce basic executable programs with an emphasis on visual art, and will develop an understanding of the conceptual underpinnings of the form. The final component of the course will focus on students integrating what they have learned about Coding into individual and/or collaborative visual work.

Our investigation will be contextualized by a survey of media artists who use programming as an integral part of their production, as well as artists who use programming as a means to an end.

COURSE LEARNING OBJECTIVES
• Begin to develop competency in Processing, including reading, writing, notating, and debugging code
• Create work with a progressively more comprehensive knowledge of coding in general and Processing in particular
• Develop an understanding of how Processing interfaces with other graphic imaging software (for ex. Photoshop, Illustrator, Final Cut Pro) and is related to other programming languages (especially Java)
• Analyze, deconstruct and build potential solutions for projects/problems
• Harness concepts of computational aesthetics in art-making
• Learn the history and evolution of coding and computational art as well as the potential for the medium to contribute to creative work

COURSE STRUCTURE
Students should expect to work a minimum 3 hours weekly outside of class time. Assignments will be posted on Canvas, and depending on assignment specifications, students will either upload their work to the class site on http://www.openprocessing.org
ASSIGNMENTS
Instructors reserve the right to modify and adjust the following assignments as necessary.

Exercises
Building up to and complimenting the larger Projects, students will be assigned regular exercises that will provide an opportunity to creatively use the code learned and create processing sketches.

Projects
Over the course of the semester, students will be assigned three Projects, and one semester-long final interactive Project.

Project 1:
Students will individually create a component part of a larger, complex object by writing a unique function. The functions will then be shared with the group and students will select some or all of these functions to use in their final programs. Students will submit one (debugged) function that draws a complex and compelling image and includes some type of interactivity. They will then create 2-3 programs using the functions as starting points to create visually successful “exquisite corpse” programs.

Project 2:
As students are learning the syntax and structure of Processing, forms and examples of how drawing is used within the medium will be introduced. Students will create one resolved program that explores issues in drawing relevant to coding. These may include interactive or generative drawing.

Project 3:
Using their growing skills in coding, students will research the gaming theories. Using this theoretical context, students will design a simple interactive game prototype. Areas like education, entertainment, or fine art applications may be explored.

Semester-Long / Final Project:
For the final Project, students will design an interactive work based on their own interests. Issues in image processing, arrays, animation, or video may be selected. Students will begin working on this Project at the beginning of the semester by researching work in coding, learning about artists/designers working with similar ideas or approaches, developing their objectives and making component visual elements, documenting their objective in written form, finding code to build upon, and finally resolving the program.

As part of the final Project, students will present their research (both visual and written) in two 15-minute presentations, the first one at approximately week 7, and the second one at approximately week 12. As part of one of the presentations, research on one or more new media artists/designer(s) must be included. This will take the form of slide lecture/discussion on the selected artist/designer’s work.

EVALUATION AND GRADING CRITERIA
All assignments submitted on time are graded with a rubric based on the objectives of the assignment. This rubric is in writing and is handed back before the next Project due date.

Late work will be lowered by one letter grade for each day it is late. All Projects must be completed in order to pass the course. Students who miss class must obtain information from peers.
REQUIRED TEXTBOOK:
Additional readings will be provided as pdfs or links on Canvas.

MATERIALS + SUPPLIES:
• Portable hard drive for backing up data (as large as you can afford)
• Sketchbook for taking notes, sketching ideas, etc.

SUPPLEMENTAL RESOURCES:
• Generative Design by Bohnacker, Gross, Laub, and Lazzeroni (Princeton Architectural Press, 2012)
• Programming Interactivity by Joshua Noble (O’Reilly, 2012).
• Generative Art by Matt Pearson (Manning Publications, 2011).
• Processing: Creative Coding and Computational Art by Ira Greenberg, (Friends of Fred, 2007).

Re-Working Projects
All Projects submitted on time may be re-worked for a better grade. Both the original and the re-worked Project will be graded, and the final grade will be an average of the two grades. In order to be credited, the re-worked Project must be submitted before the following Project’s due date.

Breakdown of grades:
- Exercises = 20%
  Completion and quality of exercises. You will use these to learn to code and to learn to integrate your coding abilities with your visual and creative skills. They are equal parts technique and concept. A successful exercise is both operational (coded effectively) and aesthetic (well composed / conceived).
- Class Participation = 10%
  This is based on how proactively you participate in the community, including sharing code, helping debug code, exchanging resources, participating in group discussions, critiques, and individual meetings.
- Projects = 30%
  Projects 1-3 will be graded on:
  - Project Resolution
    How well does your program use and explore the processes and concepts introduced in the prompt?
  - Functionality
    Is the code (or visuals) functioning? Is it clear?
  - Innovation
    The degree of innovation (formal or conceptual) taken in completing the Project
  - Aesthetics
    Unity of form with content, or aesthetic resolution of the program
- Oral presentations = 20%
  This is based on the quality of the 2 oral presentations on your semester-long Project, and also on the disciplined progression of research and the authentic evolution of your ideas throughout the semester.
- Semester-long / Final Project = 20%
  - Project Resolution
    How well does your program use and explore the processes and concepts introduced in the prompt?
  - Functionality
    Is the code (or visuals) functioning? Is it clear?
  - Innovation
    The degree of innovation (formal or conceptual) taken in completing the Project
  - Aesthetics
    Unity of form with content, or aesthetic resolution of the program

GRADING SCALE
A……….94-100
Exceptional work; all criteria of assignment have been surpassed in a distinguished manner and solutions to problems presented exhibit a depth of understanding. In addition, student is engaged in exceptional studio practice, which includes active research, looking up artists recommended, asking relevant questions about other artists’
CRITIQUE GUIDELINES:

• Arrive prepared with completed work.
• Be prepared to discuss your own and classmates' work.
• Be respectful: give feedback, not advice.
• No side conversations, texting, or additional screens during presentations or critiques.
• Attending critique is one of the most important aspects of class. If you arrive to critique late or miss a critique, you will not be able to show your work, your Project will be lowered by one grade, and participation points will be deducted from your grade.

Well-presented, superior work: all criteria of assignment were surpassed in a distinguished manner (including exceptional studio practice highlighted above). Minimal improvements could be made to the Project overall.

B+ ...........87-89
Very good work: all criteria of assignment were surpassed, minor changes could be considered and executed to bring piece together. Studio practice was exceptional.

B ..........84-86
Very good work: above average solutions and clear potential. Most criteria of assignment were surpassed with some improvements to be made. Execution was well done. Studio practice during the Project was commendable.

B- ..........80-83
Good work: most criteria of assignment were met. Work showed promise with a few significant improvements to be made. Studio practice was adequate.

C+ ...........77-79
Slightly above average work: most of the criteria of the assignment were met. The work is not yet a unified whole or cohesive statement, yet effort was made. Studio practice was adequate, but could be more reflective and thoughtful.

C ..........74-76
Average work: the assignment directions were followed and the requirements were met in a relatively routine way. Slippage in levels of craft, originality and presentation. Studio practice was adequate, but could be more reflective and thoughtful.

C- ..........70-73
Slightly below average work: the assignment directions were followed and the requirements were minimally met, but there is much room for developing assignment's concepts further. The level of craft and breadth and depth of idea development needs improvement. There is some evidence of studio practice, but the quality and quantity is lacking.

D+ ...........67-69
Below average work: an attempt to solve the problem was made, but there is much room for improving skills and developing concepts further. The criteria of the assignment are barely met. Basic craftsmanship skills have been neglected and there is a lack of breadth and depth of idea development. There is minimal evidence of studio practice, but the quality and quantity are lacking.

D ..........64-66
Inadequate, below average work: the requirements of the assignment are not addressed. The execution of the work is careless and represents an incomplete effort. Work is substandard. There is little or no evidence of studio practice.

D- ..........60-63
Unacceptable work and effort: the requirements of the assignment are not addressed. The execution of the work is careless and represents an incomplete effort. Work is substandard. There is little or no evidence of studio practice.

E ..........below 60
Unacceptable work and effort: the work submitted is inadequate; the requirements of the problem are not addressed. The piece represents careless and/ or incomplete effort. No evidence of studio practice. Work is substandard. Or, assignment was not submitted.

*Please note that a C- or below is not an acceptable grade for any course in which works or ideas, and being thoroughly engaged in course content.

A-.........90-93

A-.........90-93

A-.........90-93

A-.........90-93

A-.........90-93
COURSE EVALUATION:
Students are expected to provide feedback on the quality of instruction in this course. Evaluations are conducted online: https://evaluations.ufl.edu/evals/.
Students are informed when online evaluations are open. Summary results of these assessments are available at the same website. Instructors receive results only, after grades are finalized.

HEALTH & SAFETY GUIDELINES:
The SA+AH Health and Safety Policy handbook provides policy and training information for health and safety in the art studios. Students must follow the policies in the handbook, receive proper training, sign the signature page, no later than the third class meeting. Please make yourself familiar with the SA+AH Health and Safety Program at: http://saahhealthandsafety.weebly.com/

ATTENDANCE POLICY
Registered students who do not attend at least one of the first two class meetings for the course, and who have not contacted the department to indicate their intent, may be dropped from the course.

Participation in class is necessary to achieve the course objectives. Students are expected to arrive to class on time and be prepared to participate. Please mute cell phone prior to class. Attendance is taken at the beginning of class. You are considered tardy if you arrive after roll is taken. Three late arrivals or early self-dismissals will count as one absence. An absence does not constitute an extension of an assignment.

Attendance is mandatory. Your final grade will drop a full letter after three absences. Following that, each absence will drop your grade by another letter. Six absences will result in failing the course. Please look at your calendar at the beginning of the semester to see if you have any commitments (for example, religious holidays) that conflict with classes, due dates, or critiques. If you do have a conflict, contact Annemarie Furlong apoyofurlong@ufl.edu in advance.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

CELL PHONES / ELECTRONICS USE
Please mute cell phones while in class. We will be working in a shared space, thus listen to music only through headphones and although you undoubtedly have an amazing voice, please do not sing aloud.
Spend your time engaged in class work, not texting or browsing social media.

DRUG-FREE SCHOOL + WORKPLACE / CLEAN INDOOR AIR ACT
The SA+AH is committed to upholding the policies set forth by UF with regards to drug and alcohol use and smoking in educational facilities. Possession or use of drugs or alcoholic beverages is not allowed in the classroom or outdoor areas. In addition, The Florida Clean Indoor Air Act of 1992 prohibits smoking in educational facilities. Violation of University policies and applicable laws is grounds for disciplinary action up to and including expulsion and does not preclude the possibility of criminal charges.

ACADEMIC HONESTY POLICY
In completing the registration form at UF, every student has signed the following statement: "I understand that the University of Florida expects its students to be honest in all of their academic endeavors and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.” The Honor Code https://sccr.dso.ufl.edu/students/student-conduct-code/ specifies dishonest behaviors and possible sanctions.

DISRUPTIVE BEHAVIOR
Faculty, students, administrative and professional staff members, and other employees [hereinafter referred to as “member(s)” of the University], who intentionally act to impair, interfere with, or obstruct the mission, purposes, order, operations, processes, and functions of the University shall be subject to appropriate disciplinary action by University authorities for misconduct, as set forth in the applicable rules of the Board of Regents and the University and state law governing such actions. Be advised that you can and will be dismissed from class if you engage in disruptive behavior.

a 2.0 GPA (or C) is required, i.e., any course in the major.