SYLLABUS		IxD 256	Art Center College of Design
Adv Interaction Design studio		Online	SP21
INSTRUCTOR	Name	Maxim Safioulline	
	Contact information	**Maxim.Safioulline@Artcenter.edu**	
	Office hours/location	**Mondays, 3pm-4pm**	

COURSE DESCRIPTION

The purpose of this lab is to introduce students to interconnected digital systems. The class explores the relationships and the possibilities within the digital systems of information and control. Students will create tangible interactive experiences that explore these topics and will experiment with various forms of making, coding and hacking as a design methodology. This class introduces a deliberate and systematic approach to prototyping within the iterative design process and has a strong focus on self-learning and exploration.

SECTION DESCRIPTION

Students expand their range of design concerns beyond the screen-based interactions and explore the physical and material aspects of interaction design.
The class will start with a series of three small projects exploring core concepts of digital systems: representation, interconnectedness and control. Using the skills and knowledge gained in these projects students will create the final project exploring the possibilities and the limitations of digital media.

Students will learn to use:

- Processing, P5js
- Particle.IO, Adafruit.IO
- Particle, Adafruit and Arduino-based electronic kits
- Sensors, servo motors, LEDs and LED screens, and other electronic components

Class deliverables:

- Working prototype for every project
- Process book (case study) for the final project including: impetus, context, concept, iterations, tools and methods, system diagram, user flow, project in use, future possibilities

For the duration of the class students will keep a Web-based blog on GitHub.com. They will document their process, discoveries, learnings, and failures on a weekly basis.

SECTION ASSIGNMENTS & ANTICIPATED SCHEDULE

Project 1: Representation. Learning how to express both natural and fictional systems in code and electronics. - System diagrams and flowcharts - Modelling systems in code - Code as narrative and expressed imagination	Week 1-2
Project 2: Control. Experimenting with the affordances of control, influence and coercion through physical and graphical interface strategies. - Affordances and limitations of physical and digital interfaces - Dealing with complexity, Gestalt principles in UI design - Microinteractions	Week 3-4

Project 3: Communication. Working to reuse and repurpose technology to create an integrated system that includes physical, graphical and networking components. - Connecting physical and digital - Standards, protocols, documentation - Layers of abstraction and limitations of expertise. (Computers as reliable magic)	Week 5-6
Project 4: Exploration. Using research and self-learning strategies to build a project within a scope of pre-defined tools and technologies - Prototyping strategies - Combines physical, digital, and networking components - Using sensors, actuators, screen-based control, screen-based datapoints - Web-based API for data exchange	Weeks 7-14

COURSE LEARNING OUTCOMES

CLO 1: Documenting and communicating design process and methodologies
Students will be able to document their design process and iterations effectively and with intent. They will be able to compile these documentations in process books, design blogs, oral presentations and other forms of written and oral communication.

CLO 2: Systems thinking
Students will demonstrate the ability to approach their designs as a system, analyse its components and subsystems, and their relationships. They will be able to create various representational models, i.e. diagrams, flowcharts, schematics, and use them for system analysis.

CLO 3: Prototyping strategy
Students will be familiar with a range of prototyping techniques and strategies and will demonstrate the ability to select the ones appropriate for the design challenge at hand.

CLO 4: Research and self-learning
Students will demonstrate their ability to extrapolate from the general understanding of digital systems to gain insight into the functioninging of a particular technology or system. They will also be able to apply research techniques to learn previously unfamiliar technologies or systems.

CLO 5: Hacking and reusing technology
Students will demonstrate the ability to reuse, repurpose and subvert existing digital and physical systems, components and artefacts to serve their own needs in design research and prototyping.

ADDITIONAL INFORMATION

REQUIRED TEXTBOOK(s):	Title:		**ESTIMATED COST OF MATERIALS:**	~ $90
INSTRUCTION/HOMEWORK				
CLASS TIME (check all that apply during the term)	x	Lecture	**WEEKLY HOMEWORK:**	10 hours
	x	Instruction/Demonstration		
	x	Critique		
	x	Studio time		

(continued)

ALIGNMENT CHART									
	COURSE LEARNING OUTCOMES								
BENCHMARK ASSIGNMENTS (ie, midterm and final, only main projects, etc...)	Process	Ux	Aesthetics	Testing	Structure	Interface and Interaction	System and Ecosystem	Previs and Proto	Communication
1. Concept and Research	x	x				x	x		x
2. Exploration	x	x		x	x	x	x	x	x
3. Structure, Interaction, and Interface	x	x	x	x	x	x	x	x	x
4. Aesthetics and Communication	x	x	x			x	x	x	x

EXPECTATIONS FOR CLASSROOM CONDUCT

Art Center is committed to maintaining a civil and safe learning environment, free from bias, coercion, and harassment for all. The classroom is a shared environment where all parties are accountable for behavior and contributions to a productive and supportive atmosphere. We understand that our members represent a rich variety of backgrounds and perspectives and are committed to providing a set of conditions for learning that respects diversity. While working together to build this community we ask all members to:

- be open to the views of others
- honor the uniqueness of their colleagues
- recognize differences in learning, language, approach and ability
- appreciate the opportunity that we have to learn from each other in this community
- value each other's opinions and communicate in a respectful manner

All students are expected to abide by the Art Center Code of Conduct. All Faculty members, as Employees, are expected to abide by the Employee Standards of Conduct. The full statements of these policies can be found in the Student and Employee Handbooks. To report an incident, please see the Grievance and Complaint Policies and procedures listed in the Student, Faculty, and Employee Handbooks. If you have any concerns or would like to discuss an incident, please contact your Instructor, your Department Chair, the Center for the Student Experience, or the Office of the Provost.

POLICY AGAINST HARASSMENT

The College is committed to providing an educational environment that is free of any kind of unlawful harassment. In keeping with this commitment, the College maintains a strict policy prohibiting unlawful harassment by any employee and by any third parties, such as contractors, visitors, students or vendors. Any harassment on the basis of race, color, religious creed, sex, ancestry, national origin, age, physical or mental disability, medical condition, genetic characteristic, marital status, veteran status, sexual orientation, gender identity, transgender identity or any other characteristic protected by federal, state or local law is strictly prohibited. Examples of such conduct that may violate this policy include verbal harassment, physical harassment or visual harassment. Verbal harassment may include, but is not limited to, epithets and derogatory comments or slurs on any of the bases listed above. Physical harassment may include, but is not limited to, assaulting, impeding or blocking movement, or physically interfering with the normal work or movement of another, when directed at that individual on any of the bases listed above. Visual harassment may include, but is not limited to, the display or possession of derogatory posters, cartoons, computer images or drawings on any of the bases listed above. Violation of the Policy Against Harassment may result in disciplinary action, up to and including suspension or dismissal. Please see the Student Handbook for additional guidelines on the above.

ATTENDANCE POLICY

To complete a course successfully, students must attend all class sessions (unless they are engaged in research or location assignments that have been authorized in advance by the class instructor of the missed class). The instructor takes attendance at the beginning of each class. At the discretion of the instructor, three or more absences may result in a grade of F. Students who miss a class due to illness should discuss the absence with the instructor at the next class meeting. Students who are ill for a week or longer should inform their Department Chair's office of their absence. Please see the full Attendance Policy in the Student Handbook for more information.

DISABILITY STATEMENT

Art Center complies with the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and state and local requirements regarding students and applicants with disabilities. Under these laws, no otherwise qualified individual with a disability shall be denied access to, or participation in the services, programs and activities of the College. The Center for the Student Experience has more information on Disability Services, policy and Resources for students. Please see the full Disability Statement in the Student Handbook for more information.

STATEMENT OF ACADEMIC AND CREATIVE INTEGRITY

Academic and creative integrity is essential to personal and educational growth of students, which all members of the Art Center community are expected to uphold. This value maintains the standards of excellence of the College and creates a meaningful learning environment. A violation of the Academic and Creative Integrity Policy is defined as misconduct including but not limited to plagiarism, creative dishonesty, multiple submission of the same work, cheating, unauthorized collaboration, misrepresentation of ability, sabotage, falsification of records, and complicity in any of the above. The full Academic Integrity Policy can be found in the Student Handbook.

GRADE DESCRIPTIONS

Grades are considered FINAL when submitted by the faculty and can only be changed to correct an error in grading or to change an official Incomplete grade to a final grade. Students CANNOT submit or redo work after the end of the term unless an official Incomplete has been approved. The deadline for changing an Incomplete grade is Friday of Week 14 of the term following the term when the course was taken. The deadline for changing an incorrect grade is Friday of Week 6 following the term when the course was taken. Faculty members use the following grading system:

A	4.00 points	C+	2.50 points	D-	0.75 points	N	0.00 points (Non-attendance Failure)
A-	3.75 points	C	2.00 points	F	0.00 points (Fail)	U	0.00 points (Unsatisfactory)
B+	3.50 points	C-	1.75 points	S	0.00 points (Satisfactory)	P	0.00 points (Pass)
B	3.00 points	D+	1.50 points	I	0.00 points (Incomplete)	W	0.00 points (Withdrawal)
B-	2.75 points	D	1.00 points	M	0.00 points (Missing)		

"A" is considered exceptional, comprehensive, and standout effort
"B" is good, with a few clear areas to work on
"C" is acceptable effort, but results have broad deficiencies in several core areas
"D" is low effort with extremely spotty results,
"F" almost non-existent effort with several critical areas not being grasped, or one of the critical items in the assessment methods was not reached.