



PRIN525: Physical Maker Lab
Designing for Emotions: Making Interactive Objects

Units: 2.0

Spring 2022–Wednesdays–5:00-7:50 PT

Location: IYH, Room 111

Instructor: Yihyun Lim, Trent Jones

Office: Online

Office Hours: By appointment

Contact Info: yihyun@usc.edu, trentjon@usc.edu

IT Help:

<https://uscedu.sharepoint.com/sites/IYASStudent/SitePages/IT-Resources.aspx>

Hours of Service: 8:30am - 6:30pm

Contact Info: iya.helpdesk@usc.edu, 213-821-6917

Course Description

We are surrounded by objects in our daily lives, whether it is functional, aesthetical, or evocative. How can we create objects that would elicit specific types of emotions from its users? In this hands-on studio course, students will be introduced to a set of emotions taken from Plutchik's emotion wheel (delight, peace, anxiety, disgust, dread), sensing inputs (light, sound, touch, etc), actuators (haptics, heat, moisture, etc), and medium (paper, wood, concrete, textile, silicone, resin, etc) to create affective and embodied artifacts. Prior to engaging in the design activity, students will conduct self-ethnography by observing their own emotional responses and documenting examples of objects that elicit specific types of emotions. Through a semester-long exploration, students will design and prototype affective objects and also perform user-evaluation of their prototyped objects.

Learning Objectives and Outcomes

Students in this course will be able to design tangible interactions and explore affective, emotional design of objects. Upon completing this course, students will be able to:

- Develop interactivity in everyday materials
- Design affective interactions using materials and form
- Translate design research (self-ethnography and observations) into concepts for interactivity
- Apply their knowledge in digital fabrication and other crafts method in design interactive objects
- Evaluate prototyped objects through user testing

Prerequisite(s): none

Co-Requisite(s): none

Concurrent Enrollment:

Recommended Preparation: Take Maker Lab orientation and have appropriate training to use equipment prior to first class.

Course Notes / Participation

This class is a studio class that involves demonstrations and execution of craft. It is crucial for students to attend in order to succeed. The demonstrations, lectures and Information given in class may not be imparted concisely through handouts, classmates or notes. Students are responsible for all readings, assignments, including homework, in-class work, lectures, and presentations.

Description and Assessment of Assignments

The following is a breakdown of the assignment expectations.

Grading

10 %	Participation / In-class Presentations
75 %	5 Assignments (15% each)
15 %	Exhibition and Write Up (Documentation)

Required Supplies

- Basic interactive materials needed for lecture/demo sessions will be provided by the instructors. Additional materials needed to complete the assignments should be purchased by students.
- USB Portable storage device/flash drive or Cloud. Back up everything. Losing work is not an acceptable excuse for missing work. It cannot be emphasized enough that you should have a reliable backup arrangement.
- No required textbook

Grading Scale

Course final grades will be determined using the following scale

A	94-100
A-	90-93
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

Assignment Submission Policy

Unless otherwise noted, all assignments must be submitted as physical drawings or in digital format (PDFs) when appropriate. For assignments delivered in class (such as presentations), the work must be completed before the commencement of the class session in which the assignment is due.

Grading Timeline

Grades and feedback for all assignments will be returned to students within one week of submission. Grades will be provided over email. Students are encouraged and expected to keep track of their status in the class through documenting these grades. If at any point, a student is uncertain about their status in the class, students may email yihyun@usc.edu, trentjon@usc.edu

Additional Policies

Assignments will be accepted after the deadline with the following grade penalties. Do not ask for extensions; the below are the extensions.

- Submission in the 24 hours after the deadline 10% deduction
- Submission between 24 and 48 hours after the deadline 20% deduction
- Submission between 48 hours and 3 days after the deadline 50% deduction
- Submission more than 3 days after the deadline 100% deduction

Academy Attendance Policy

The Academy maintains rigorous academic standards for its students and on-time attendance at all class meetings is expected. Each student will be allowed two excused absences over the course of the semester for which no explanation is required. Students are admonished to not waste excused absences on non-critical issues, and to use them carefully for illness or other issues that may arise unexpectedly. Except in the case of prolonged illness or other serious issue (see below), no additional absences will be excused. Each unexcused absence will result in the lowering of the final grade by $\frac{1}{3}$ of a grade (e.g., an A will be lowered to A-, and A- will be lowered to a B+, etc.). In addition, being tardy to class will count as one-third of an absence. Three tardies will equal a full course absence.

Students remain responsible for any missed work from excused or unexcused absences. Immediately following an absence, students should contact the instructor to obtain missed assignments or lecture notes and to confirm new deadlines or due dates. Extensions or other accommodations are at the discretion of the instructor.

Automatically excused absences normally may not be used for quiz, exam or presentation days. Using an excused absence for a quiz, exam or presentation, such as in the case of sudden illness or other emergency, is at the discretion of the instructor.

In the case of prolonged illness, family emergencies, or other unforeseen serious issues, the student should contact the instructor to arrange for accommodation. Accommodation may also be made for essential professional or career-related events or opportunities. All accommodations remain at the discretion of the instructor, and appropriate documentation may be required.

Fall 2021 addendum:

- Unless students provide an accommodation letter from USC's Office of Student Accessibility Services or a letter from IYA Student Services detailing visa or travel restrictions, attendance and active participation is expected in the classroom. Any student with such accommodations should submit their accommodation document to the instructor as soon as possible to discuss appropriate accommodations. Either classroom recordings or live remote access to the class via Zoom will be provided.

- Students who are experiencing illness should not attend class in person. Please inform the instructor in advance of any class sessions that you can't attend for medical reasons, and accommodations will be arranged to view recorded lectures and submit alternatives to any missed class participation. Students will not be penalized for not attending class in person under these circumstances.
- In the event that you find yourself experiencing COVID-19 related symptoms, in keeping with university recommendations, you should Stay home! This is the best way to prevent spreading COVID-19 as supported by scientific evidence; Please do not come to an in-person class if you are feeling ill, particularly if you are experiencing symptoms of COVID-19.

HOW TO PURCHASE SOFTWARE AT THE DISCOUNTED ACADEMY RATE THROUGH THE USC BOOKSTORE:

The following first year software are now available for purchase online through the USC Bookstore at the Academy discounted rate:

<u>Software</u>	<u>IYA Short-Term License at USC Bookstore</u>
Adobe Creative Cloud	\$70 2021-2022 annual license

1. Visit the USC Bookstore online: <https://www.uscbookstore.com/usciasoftware>
2. Select the software license(s) you would like to purchase.
3. When you proceed to checkout, add the Promo Code "IYASoftware" (This will override the listed taxes).
4. For shipping, select FedEx Home Delivery (free).
5. Once you complete your online purchase, you will receive a confirmation email/receipt. *(Note that even if a shipping charge appears on your invoice, it will not be charged to your credit card. This relates to a known technical problem with the Bookstore's online store.)*
6. Upload your receipt [here](#) to receive access to your purchased license.
7. You will be notified by email when the license has been activated

Course Schedule: A Weekly Breakdown

Week	Title and Topics	Deliverables
1 Jan 12	Introduction to 'Designing for Emotions' <ul style="list-style-type: none"> • What are emotions and emotional design? • Project 1 kick-off <ul style="list-style-type: none"> ▫ JOY: Delighted ▫ ANGER: Disgust, Annoyed, Frustrated ▫ SURPRISE: confused ▫ LOVE: Caring, Satisfied ▫ SADNESS: Isolated, lonely ▫ NERVOUS: Anxious, Worried • Process/reflection journal • Set up documentation site 	

2 Jan 19	Emotion 1: Designing for 'JOY'_Part 1 • Lecture/Demo: Paper Interactions • Activity <ul style="list-style-type: none"> - Exploring sub-emotions of Joy: Delight, etc, - Concept development 	Write: 'Delightful' moment journal post (Due Jan 19)
3 Jan 26	Emotion 1: Designing for 'JOY'_Part 2 • 1:1 Desk crit - Concept/journal discussion • Prototype development / studio time	Continue developing project
4 Feb 2	Emotion 1: Designing for 'JOY'_Part 3 • Project 1 Presentation Emotion 2: Designing for 'ANGER'_Part 1 • Lecture/Demo: Non-woven materials • Activity <ul style="list-style-type: none"> - Exploring sub-emotions of Anger: Disgust/ Annoyed/ Frustrated - Concept generation 	Emotion 1 Project due (Feb 2) - Blog post of process documentation - Physical prototype
5 Feb 9	Emotion 2: Designing for 'ANGER'_Part 2 • 1:1 Desk crit - Concept/journal discussion • Prototype development / studio time	Write: 'Angry' moment journal post (Due Feb 9)
6 Feb 16	Emotion 2: Designing for 'ANGER'_Part 3 • Project 2 Presentation Emotion 3_Designing for 'NERVOUS'_Part 1 • Lecture/Demo: Non-woven materials - Making it Move (Kinetic Interactions) •Activity <ul style="list-style-type: none"> - Exploring sub-emotions of Nervous: Anxious, Worried - Concept generation 	Emotion 2 Project due (Feb 16) - Blog post of process documentation - Physical prototype
7 Feb 23	Emotion 3_Designing for 'NERVOUS'_Part 2 • 1:1 Desk crit - Concept/journal discussion • Prototype development / studio time	• Write: 'Nervous' moment journal post (Due Feb 23)
8 Mar 2	Emotion 3_Designing for 'NERVOUS'_Part 3 • Project 3 Presentation Emotion 4_Designing for 'LOVE'_Part 1 • Lecture/Demo: Woven materials	Emotion 3 Project due (Mar 2) - Blog post of process documentation - Physical prototype

	<ul style="list-style-type: none"> • Activity <ul style="list-style-type: none"> - Exploring sub-emotions of Love: caring, satisfied.. - Concept generation 	
9 Mar 9	Emotion 4_Designing for 'LOVE'_Part 2 <ul style="list-style-type: none"> • Desk crit - Concept/journal discussion • Prototype development / studio time 	<ul style="list-style-type: none"> • Write: 'Loved' moment journal post (Due Mar 9)
10 Mar 16	Spring Break - No class	
11 Mar 23	Emotion 4_Designing for 'LOVE'_Part 3 <ul style="list-style-type: none"> • Project Presentation Emotion 5_Designing for 'SURPRISE'_Part 1 <ul style="list-style-type: none"> • Lecture/Demo: Woven materials - Making it Move (Kinetic Interactions) • Activity <ul style="list-style-type: none"> - Exploring sub-emotions of Surprise: Confused, etc.. - Concept generation 	Emotion 4 Project due (Mar 23) <ul style="list-style-type: none"> - Blog post of process documentation - Physical prototype
12 Mar 30	Emotion 5_Designing for 'SURPRISE'_Part 2 <ul style="list-style-type: none"> • Desk crit - Concept/journal discussion • Prototype development / studio time 	<ul style="list-style-type: none"> • Write: 'Surprised' moment journal • Read: TBD
13 Apr 6	Emotion 5_Designing for 'SURPRISE'_Part 3 <ul style="list-style-type: none"> • Presentation Evaluation and Feedback (Testing Design) <ul style="list-style-type: none"> • Designing user testing protocols: how effective are your prototypes in communicating its affective value? 	Emotion 5 Project due (April 6) <ul style="list-style-type: none"> - Blog post of process documentation - Physical prototype
14 Apr 13	Activity: Refine and finalize user testing Studio time: Refine previous prototypes, prepare for testing	Testing protocols draft, artist statement due in class (PDF)
15 Apr 20	Exhibition / User Testing <ul style="list-style-type: none"> • IYA community exhibition, presentation • Collection of user testing data 	
16 Apr 27	Write up and process documentation (blog post) <ul style="list-style-type: none"> • Writing about your project: data collection analysis, evaluation • How can you improve, what would you do differently? • How would these concepts be applied to a product experience? 	Final Deliverable: Write up and process documentation (blog post (Due April 27))

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Student Health Counseling Services - (213) 740-7711 – 24/7 on call

engemannshc.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call

suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP)

-213-740-9355 (WELL)

<https://studenthealth.usc.edu/sexual-assault/>

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Relationship and Sexual Violence Prevention and Services provides immediate therapy services for situations related to gender- and power-based harm (e.g., sexual assault, domestic violence, stalking). (wording from the site)

Office of Equity and Diversity (OED) | Title IX - (213) 740-5086

equity.usc.edu, titleix.usc.edu

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

USC Policy Reporting to Title IX (213) 740-5086

<https://policy.usc.edu/reporting-to-title-ix-student-misconduct/>

The university encourages individuals to report prohibited conduct to the *Title IX Office*. Individuals can report to the university *Title IX Coordinator* in the *Office of Equity and Diversity*.

Bias Assessment Response and Support - (213) 740-2421

studentaffairs.usc.edu/bias-assessment-response-support

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710

studentaffairs.usc.edu/ssa

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.