PUFY 1263: Emergent Objects

Spring 2026, PUFY 1263

CRN:

Spring 2026

Class Time: Monday, 12:10 PM – 2:50 PM

Location: Parsons 2 W 13th #1013

Canvas Site: to be added

Instructor: Ariel Churi

E-mail: churia@newschool.edu

Office Hours: By appointment virtually or before or after class.

Course Description

Program, fabricate, and document electronic objects to build a better future. Students gain an understanding of tactile, human-computer interfaces by producing evocative and functional devices. The course covers electrical engineering fundamentals, circuit design, basic Python coding, and working with microcontrollers to create responsive, research-based designs.

Learning Outcomes

By the successful completion of this course, students will be able, at an introductory level, to:

1. **Critical Thinking:** Critically reflect on how the design and function of an electronic object challenge societal values or ecological sustainability.

2. **Tools, Materials, Methods:** Write and debug basic Python code and create electronic circuits using microprocessors.

3. **Experimentation:** Play with the concept of a "fantastic object" and experiment with non-traditional human-object interactions through play and discovery.

4. **Discipline Specific:** Apply design research methodologies and analyze user behaviors to develop detailed personas and user journeys.

5. **Broad Application:** Use speculative scenarios to inspire creative problem-solving across art, design, and strategic thinking fields.

6. **Life:** Reflect on personal responsibility and self-understanding through the creation of objects that respond to a utopian or dystopian future.

7. **Reflection:** Document their process and reflect on their learning via the **Parsons Learning Portfolio**.

Weekly Outline

week + date	Activity	Due
Week 1 Jan 26	Class community agreements, expectations on attendance and communication, Canvas site walkthrough. **Intro:** Syllabus and supplies. **Lecture:** Utopia/Dystopia. **Workshop:** Setup Codium.	Lab Orientation
Week 2 Feb 2	**Lecture:** The User Persona. **Demo:** Basic Python (Variables/Conditions). **Workshop:** Logic puzzles.	Persona Draft
Week 3 Feb 9	**Lecture:** Electricity Fundamentals. **Demo:** Circuit Prototyping. **Workshop:** Basic circuits.	Python App
— Feb 16	**NO CLASS – President's Day**	—
Week 4 Feb 23	**Lecture:** Code meets electricity. **Demo:** Blinking LEDs with Code. **Workshop:** Wiring.	Circuit Plan
Week 5 Mar 2	**Workshop:** Your first electronic object.	Object Sketches
Week 6 Mar 9	**Lecture:** Coding fundamentals. **Demo:** Sensors & Input. **Workshop:** Soldering Intro.	Sell Sheet
— Mar 16	**NO CLASS – Spring Break**	—
Week 7 Mar 23	**Lecture:** Cardboard Engineering. **Demo:** Enclosure building. **Workshop:** Prototyping.	User Journey
Week 8	**Mid-Term Check-ins:** Detailed individual assessment of progress.	Up-to-date grades

week + date	Activity	Due
Mar 30 **Week 9**	**Demo:** Advanced Code Loops.	Prototype Pres.
Apr 6 **Week 10**	**Workshop:** Final project troubleshooting. **Workshop:** Soldering and final assembly.	Enclosure build
Apr 13 **Week 11**	**Workshop:** Code debugging and wiring refinement.	Assembled Object
Apr 20 **Week 12**	**Lecture:** Product Photography.	Test results
Apr 27 **Week 13**	**Workshop:** Peer User Testing. **Work Session:** Final polish and presentation prep.	Draft Portfolio
May 4 **Week 14**	**Final Review:** Wrap-up and reflection.	Reflection Post
May 11 **Week 15**	**Final Presentation**	Final Project
May 12	(*Note: Tuesday make-up day session*).	

Assessable Tasks

Assessable Tasks are activities, assignments, projects that satisfy the course's learning outcomes.

Assessable Tasks Summary:

- **Persona & User Journey (10%):** Students analyze user needs to create a research-backed user profile. (Maps to LO 4).
- **Python Application (10%):** A functional app using variables and loops with commented code. (Maps to LO 2).
- **Electronic Circuit & Microcontroller (10%):** A physical prototype demonstrating basic engineering and circuit design. (Maps to LO 2).
- **Object Sketches & Presentation (10%):** Visualizing the appearance and functionality of a future object. (Maps to LO 5).
- **Final Emergent Object (20%):** A complete, responsive device designed for a utopian/dystopian world. (Maps to LO 1, 3, 6).

Learning Portfolio

You will use the Parsons Learning Portfolio throughout your education at Parsons. It is an ongoing, cumulative repository for your creative development and experience across courses, and across years. It archives your working process, skills learned, and connections you make between assignments, courses, and years, as well as final "finished" work. The courses in the first year emphasize the process – how you started, what happened next (and why), and how you ended up at your final work for each project.

Showing preliminary work (sketches, drafts, notes, research, etc.) as well as final documentation of your work will help to tell your story and make connections that may not have otherwise been apparent. In Integrative Seminar and Studio, the Parsons Learning Portfolio will serve as a bridging mechanism to aid conversation and provide access to projects and writings across the seminar and studio, and stimulate critically reflective learning, thinking, writing and making.

Make sure to use the MANDATORY Parsons Learning Portfolio Template- and do not change the template as this is a shared component of the Parsons experience. Also please add a Learning Portfolio link to your Canvas Bio. This allows fellow students and faculty to access your portfolio.

Required Readings

To be added based on course needs.

Materials and Supplies

Please note that there are materials costs associated with this studio course and you should expect to purchase at least $50 of supplies. The expected cost does not include printer points that you receive as a student, nor does it include the materials from the materials kit that is purchased as you enter the first year. You can find a list of the materials kit items on the First Year advising page: http://www.newschool.edu/parsons/academic-advising-first-year-students/

Additional supplies for this course:

- Raspberry Pi Pico microcontroller (or similar if you have experience)
- Electronic components (LEDs, sensors, wires, breadboard)
- Soldering supplies - available in Making Center [need to check this is up to date]
- Cardboard and basic craft materials for enclosures
- USB cable for microcontroller programming

Note: Additional specialized sensors or components may be needed depending on your final project concept.

Learning Together/Community Agreement

At the beginning of the semester students and faculty will work together to establish a common culture/approach for learning together that could take the form of Community Agreements. As you prepare for this process is important for you to review the following statements:

- **CURRICULAR JUSTICE ACKNOWLEDGMENT STATEMENT**
- **STATEMENT ON DIVERSITY, EQUITY & INCLUSION**
- **PRONOUNS STATEMENT**

This course Community Agreements and Guidelines to Learning Together are:

We will establish these agreements together on the first day of class. Some principles to guide our work together include:

- Respect for all voices and perspectives in the classroom
- Active listening during critiques and discussions
- Taking creative risks and supporting others as they experiment
- Being present and engaged during class time
- Clear communication about challenges or absences
- Collaborative problem-solving and mutual support

Grading and Evaluation

Students' ability to meet the course's learning outcomes will be evaluated based on the following criteria:

- Attend regularly and communicate any challenge or absences to their faculty
- Solve problems, both creative and technical through an iterative process
- Turn in project assignments and course material on time
- Document their research in the development of projects
- Describe the cross-course exploration between the Studio and Seminar
- Participate in class discussions and critiques
- Be accountable in collaborative work
- Improve in technical, creative, and problem solving abilities
- Submit thoughtful studio works that have undertaken several stages of ideation

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About Attendance and Grading

Attendance will be taken at the start of every class to encourage punctuality. More than three absences (20% of the term) may lead to failure of the course.

Students should be assessed fully and comprehensively against all measures outlined in the course syllabus, including participation. Class Participation, which includes attendance and meeting due dates, represents 40% of the overall grade, validating the importance of students' active engagement in each step of the learning process.

Faculty must use Starfish (Student Success Network) to track students' attendance and to document concerns.

Final Grade Calculation

Class Participation: 40%

- 10% Attendance/ Meeting Due Dates
- 10% Work-in-progress reviews; class discussions
- 10% Being prepared for class with the correct tools
- 10% Learning Portfolio engagement

Projects: 60%

- 10% Persona & User Journey
- 10% Python Application
- 10% Electronic Circuit & Microcontroller
- 10% Object Sketches & Presentation
- 20% Final Emergent Object

See individual assignment sheets for grading criteria.

100% TOTAL

UNIVERSITY POLICY & RESOURCES

Resources

The university provides many resources to help students achieve academic and artistic excellence. These resources include:

The University (and associated) Libraries

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The University Learning Center

The University Learning Center

University Disabilities Services

In keeping with the university's policy of providing equal access for students with disabilities, any student with a disability who needs academic accommodations must contact SDS. There are several ways for students to contact the office: via email at StudentDisability@newschool.edu, through the Starfish service catalog, or by calling the office at 212.229.5626. A self-ID form can also be completed on the SDS webpage at www.newschool.edu/student-disability-services. Once you contact the office, SDS staff will arrange an intake appointment to discuss your concerns and, if appropriate, provide you with accommodation notices to give to me. Please note that faculty will not work unilaterally with students to provide accommodations. If you inform me of a disability but do not provide any official notification, I must refer you to SDS.

Making Center

The Making Center is a constellation of shops, labs, and open workspaces that are situated across the New School to help students express their ideas in a variety of materials and methods. We have resources to help support woodworking, metalworking, ceramics and pottery work, photography and film, textiles, printmaking, 3D printing, manual and CNC machining, and more. A staff of technicians and student workers provide expertise and maintain the different shops and labs. Safety is a primary concern, so each area has policies for access, training, and etiquette with which students and faculty should be familiar. Many areas require specific orientations or training before access is granted.

Health and Wellness

Health and Wellness: additional services and support available to New School students.

Grading Standards

Undergraduate

A student's final grades and GPA are calculated using a 4.0 scale.

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A \[4.0\] Work of exceptional quality, which often goes beyond the stated goals of the cours
A- \[3.7\] Work of very high quality (90% \- \<95%)
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B+ \[3.3\] Work of high quality that indicates higher than average abilities (87% \- \<90%)
B \[3.0\] Very good work that satisfies the goals of the course (83% \- \<87%)
B- \[2.7\] Good work (80% \- \<83%)
C+ \[2.3\] Above-average work (77% \- \<80%)
C \[2.0\] Average work that indicates an understanding of the course material; passable (73%
Satisfactory completion of a course is considered to be a grade of C or higher.
C- \[1.7\] Passing work but below good academic standing (70% \- \<73%)
D \[1.0\] Below-average work that indicates a student does not fully understand the assignme
F \[0.0\] Failure, no credit (0% \- \<60%)
GM Grade missing for an individual
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Grade of W

The grade of W may be issued by the Office of the Registrar to a student who officially withdraws from a course within the applicable deadline. There is no academic penalty, but the grade will appear on the student transcript.

Grades of Incomplete

The grade of I, or temporary incomplete, may be granted to a student under unusual and extenuating circumstances, such as when the student's academic life is interrupted by a medical or personal emergency. This mark is not given automatically but only upon the student's request and at the discretion of the instructor. A Request for Incomplete form must be completed and signed by the student, instructor and program director. The time allowed for completion of the work and removal of the "I" mark will be set by the instructor with the following limitations:

Undergraduate students: Work must be completed no later than the seventh week of the following fall semester for spring or summer term incompletes and no later than the seventh week of the following spring semester for fall term incompletes. Grades of "I" not revised in the prescribed time will be recorded as a final grade of "F" by the Registrar's Office.

College, School, Program and Class Policies

A comprehensive overview of policy may be found under Policies: A to Z. Students are also encouraged to consult the Academic Catalog for Parsons.

Canvas

Use of Canvas may be an important resource for this class. Students should check it for announcements before coming to class each week.

Electronic Devices

The use of electronic devices (phones, tablets, laptops, cameras, etc.) is permitted when the device is being used in relation to the course's work. All other uses are prohibited in the classroom and devices should be turned off before class starts.

Responsibility

Students are responsible for all assignments, even if they are absent. Late assignments, failure to complete the assignments for class discussion and/or critique, and lack of preparedness for in-class discussions, presentations and/or critiques will jeopardize your successful completion of this course.

Active Participation and Attendance

Class participation is an essential part of class and includes: keeping up with reading, assignments, projects, contributing meaningfully to class discussions, active participation in group work, and attending synchronous sessions regularly and on time.

Parsons' attendance guidelines were developed to encourage students' success in all aspects of their academic programs. Full participation is essential to the successful completion of coursework and enhances the quality of the educational experience for all, particularly in courses where group work is integral; thus, Parsons promotes high levels of attendance. Students are expected to attend classes regularly and promptly and in compliance with the standards stated in this course syllabus.

While attendance is just one aspect of active participation, absence from a significant portion of class time may prevent the successful attainment of course objectives. A significant portion of class time is generally defined as the equivalent of three weeks, or 20%, of class time. Lateness or early departure from class may be recorded as one full absence. Students may be asked to withdraw from a course if habitual absenteeism or tardiness has a negative impact on the class environment.

I will assess each student's performance against all of the assessment criteria in determining your final grade.

Using AI and Generative Tools in Parsons First Year

Please note that the use of Artificial Intelligence and generative text and image tools are addressed in the New School statement on Student Academic Integrity. As a general rule please consider the following with regards to AI:

- Do not submit any final work - writing or images - generated by AI tools without written permission from your faculty.

- AI tools deliver results that have been synthesized and averaged from many non citable sources. Misrepresentations are easy to miss.
- The AI tech space is rapidly changing and will continue to be contested. Be discerning in how you use these tools.
- Remember why you are at Parsons - to invest in yourself as a creative. Explore these tools with curiosity and criticality, rather than dependency.

Faculty Specific policy about the use of AI and generative tools:

Students may use AI as a learning assistant to clarify code or brainstorm, but **no final work (text, code, or images) generated by AI may be submitted** as your own without written permission. All code submitted must be written and understood by you. You will be expected to explain your code and problem-solving process during critiques and reviews.

Academic Honesty and Integrity

Compromising your academic integrity may lead to serious consequences, including (but not limited to) one or more of the following: failure of the assignment, failure of the course, academic warning, disciplinary probation, suspension from the university, or dismissal from the university.

Students are responsible for understanding the University's policy on academic honesty and integrity and must make use of proper citations of sources for writing papers, creating, presenting, and performing their work, taking examinations, and doing research. It is the responsibility of students to learn the procedures specific to their discipline for correctly and appropriately differentiating their own work from that of others. The full text of the policy, including adjudication procedures, is found on the university website under Policies: A to Z. Resources regarding what plagiarism is and how to avoid it can be found on the Learning Center's website.

The New School views "academic honesty and integrity" as the duty of every member of an academic community to claim authorship for his or her own work and only for that work, and to recognize the contributions of others accurately and completely. This obligation is fundamental to the integrity of intellectual debate, and creative and academic pursuits. Academic honesty and integrity includes accurate use of quotations, as well as appropriate and explicit citation of sources in instances of paraphrasing and describing ideas, or reporting on research findings or any aspect of the work of others (including that of faculty members and other students). Academic dishonesty results from infractions of this "accurate use". The standards of academic honesty and integrity, and citation of sources, apply to all forms of academic work, including submissions of drafts of final papers or projects. All members of the University community are expected to conduct themselves in accord with the standards of academic honesty and integrity. Please see the complete policy in the Parsons Catalog.

Intellectual Property Rights

The New School (the "university") seeks to encourage creativity and invention among its faculty members and students. In doing so, the University affirms its traditional commitment to the personal ownership by its faculty members and students of Intellectual Property Rights in works they create. The complete policy governing Intellectual Property Rights may be seen on the university website, on the Provost's page.

Student Course Ratings (Course Evaluations)

During the last two weeks of the semester, students are asked to provide feedback for each of their courses through an online survey. They cannot view grades until providing feedback or officially declining to do so. Course evaluations are a vital space where students can speak about the learning experience. It is an important process which provides valuable data about the successful delivery and support of a course or topic to both the faculty and administrators. Instructors rely on course rating surveys for feedback on the course and teaching methods, so they can understand what aspects of the class are most successful in teaching students, and what aspects might be improved or changed in future. Without this information, it can be difficult for an instructor to reflect upon and improve teaching methods and course design. In addition, program/department chairs and other administrators review course surveys. Instructions are available online here.