

MAGD 271 Interactive Communication

Spring 2021

Classroom

McGraw 127

Meeting Times

11am – 12:15pm, Mondays and Wednesdays

Instructor

Fred Leighton, Assistant Professor MAGD program / Communication department

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Office Phone 262-472-5075

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Virtual Office Hours

Tuesdays and Thursdays 1:00pm – 3:30pm by appointment. Meetings can be schedule for alternate times, by appointment. If you plan on scheduling a meeting, during regular office hours or for alternate times, please email the Instructor in advance, with a requested day and time, so that a Webex online meeting can be set up. You will receive a Webex meeting invitation following your request.

Office

L1217G, Andersen Library, located in the L1217 corridor (near TV Station). **Please note all office hours or other meetings outside of scheduled class meetings, will be virtual.**

Prerequisites

MAGD 150 and MAGD 210

Course Format

One in-person class meetings per week, mixed format, lectures, discussions, and lab/studio time. Additional information and assignments online via Canvas.

Due to COVID-19 circumstances, the entire class cannot meet in McGraw 127 for each class meeting safely; therefore, students will be expected to attend either the Tuesday or Thursday class meeting in-person, so that the class size meets University guidelines. Prior to the first week of classes, you will receive an email from the Instructor letting you know which day to attend. Course material and related assignments that are not part of in-person class meetings will be available on Canvas along with information that supports in-person class meetings. Any remote synchronous class meetings, after November 20, will take place via Canvas and Webex.

Course Overview

In this course, students will design, develop, and deliver working interactive media projects for computers with control via keyboard and physical interfaces. Content will be chosen by students, within the parameters and goals for an assignment or project. Students will learn to develop interactive projects using Arduino IDE software, a programming software that allows for writing sketches (programs). Students will also learn to the capabilities of physical interfaces including the Circuit Playground Express microcontroller board. Arduino sketches are transferred to the microcontroller board to run sketches. Fabrication of custom components and prototyping techniques for project work will be part of the course and will include working with a laser cutter. Interaction design theory and process will be introduced through lectures, readings, and discussion.

Course Objectives

By the end of the course, students will:

Be able to create programs using the Arduino IDE (Integrated Development Environment) software.

Design and develop programs using the Circuit Playground Express microprocessor board programmed with the Arduino IDE.

Learn to write code for Arduino microprocessors, for use with Circuit Playground Express microcontrollers.

Learn capabilities of Circuit Playground Express, a microcontroller that contains multiple sensors (sound, light, temperature, movement) and outputs (data, speaker, colored light).

Learn a design process for developing projects that includes experimentation.

Understand the role of an interaction designer and examine examples of interaction design through readings, lectures, and discussions.

Learn prototyping methods for interaction design projects.

Apply principles of interaction design to course projects.

Learn fabrication methods including the use of a laser cutter for project components.

Develop skills in providing meaningful, constructive feedback for fellow students in class critiques.

Readings

Readings and resources will be made available during the semester on Canvas.

Sources will include:

Designing Interactions, Bill Moggridge, 2007.

Digital By Design, Troika (Conny Freyer, Sebastien Noel, Eva Rucki), 2008.

Makers: All Kinds of People Making Amazing Things In Garages, Basements, and Backyards, Bob Parks, 2006.

MAKE Magazine and online articles

Materials

Software will be available on computers in the classroom and remotely via Citrix. Any software tools used beyond what is available through the University will be free or open-source software.

Students should have some means of saving files, a thumb drive or other external drive, or online means of saving files (dropbox.com, Google drive etc.)

Canvas, and shared drives will be used for exchanging files.

All relevant course information will be located on Canvas.

Software / Microcontrollers

Arduino IDE software, installed on all computers in McGraw 127

Available from Campus Self-Service and at <https://www.arduino.cc/>

Circuit Playground Express

<https://www.adafruit.com/product/3333>

Grading Opportunities

The final course grade will be calculated from the following areas:

30% assignments

70% projects

There will be three graded assignments that will each be worth 10% of the final grade. Details for each assignment will be given in the assignment description on Canvas.

There will be two graded projects. The first project will each be worth 30% of the overall course grade. The second project will be worth 40% of the final grade. Details for each project will be given in the project description on Canvas.

Class Mode and Attendance

This will be a course that meets in-person. Because of circumstances due to COVID-19, the density of students allowed in the McGraw 127 classroom will be limited to less than the full number of students enrolled. For this reason, students will only be expected to attend one in-person class meeting a week. The instructor will email students with information regarding which day to attend (Tuesday or Thursday) prior to the start of the semester. Course material and related assignments that are not part of in-person class meetings will be available on Canvas along with information that supports in-person class meetings.

After November 20, all class meetings will be remote. The majority of course material will be delivered in an asynchronous manner via Canvas. There may be some synchronous meetings via Canvas and Webex. Students will be notified in advance as to the format and schedule for this time period on Canvas.

If the course mode changes during the semester, due to COVID-19 concerns, classes will meet remotely.

If you have a legitimate excuse for missing class or assignment and project due dates, i.e., doctors appointment, emergency, or illness, please communicate with the instructor in person or by email and provide documentation.

Safety / COVID-19

Please follow University guidelines for minimizing your risk and that of others to infection. Face coverings are required in classrooms. This means that eating will not be allowed in classrooms because it requires the removal of facial coverings.

Hand Sanitizer and face masks will be available in the classroom, but you may want to bring your own as well.

If you have a health condition or a disability that prevents you from wearing a mask or face covering, you may seek an accommodation through the CSD (Center for Students with Disabilities, <https://www.uww.edu/csd>)

Grading Standards

Letter Grades:

A (93 and above) – Outstanding

A- (90 – 92) – Excellent

B+ (87 – 89) – High Achievement

B (83-86) – Good

B- (80 – 82) – Meets Requirements

C+ (77 – 79) – Acceptable

C (73-76) – Average

C- (70 – 72) – Below Average

D+ (67 – 69) – Below Average

D (63 – 66) – Below Average

D- (60 – 62) – Below Average

F (59 or below) – Failure

Criteria for evaluation of assignments and projects:

Quality of work relating to concepts, ideas and research, as well as effective and creative use of tools for required tasks. All graded work assignments, and projects, will clearly state the objectives and areas of grading. This information will be included in the assignment, or project description. Feedback for graded work will communicate how a student performed and how the grade was calculated following the stated criteria. If there is any question during the semester as to why a grade was given or how it was determined, please see the instructor during office hours or other scheduled appointment time.

Attendance Policy

Class attendance is critical to understanding the subject matter and successfully completing the course. If you are not able to attend a class meeting, use information posted on Canvas to keep up to date with class material.

Student Conduct

The University of Wisconsin-Whitewater is dedicated to a safe, supportive and non-discriminatory learning environment. It is the responsibility of all undergraduate and graduate students to familiarize themselves with University policies regarding Special Accommodations, Academic Misconduct, Religious Beliefs Accommodation, Discrimination and Absence for University Sponsored Events (for details please refer to the Schedule of Classes; the "Rights and Responsibilities" section of the Undergraduate Catalog; the Academic Requirements and Policies and the Facilities and Services sections of the Graduate Catalog; and the "Student Academic Disciplinary Procedures (UWS Chapter 14); and the "Student Nonacademic Disciplinary Procedures") (UWS Chapter 17).

Students with Disabilities

Learning support services for students with disabilities is provided.

Students can get more information at the Center for Students with Disabilities:

<http://www.uww.edu/csd>