

Welcome to ECE101: Foundations in ECE

Instructor: Maxine Xiu

Time: Wednesdays 5:30-7:30pm

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Location: Engineering C205

Course Description: For the first half of the semester, ECE101 - Foundations in ECE will focus on the diversity of technical areas within ECE as well as potential careers by simulating an internship experience. You will first work to become a technical expert on the available subsystem of your choice, then collaborate with other technical experts in your class to create a complete proposal. That proposal will then be presented to professional engineers as part of a community forum. The second half of the semester will be your opportunity to create your own Arduino-based project.

Upon successful completion of the course, students shall be able to:

- Describe the key ECE concentrations available at CSU and how they interact in real engineering applications.
- Employ the engineering method to effectively approach engineering challenges.
- Incorporate non-technical constraints into an engineering solution.
- Identify a range of technical and nontechnical skills within themselves which are valuable in ECE.
- Effectively communicate benefits and drawbacks of an engineering recommendation.
- Develop and maintain a constructive research journal.
- Implement an ECE project using an Arduino and circuit board.

Office Hours: By appointment only so please email me.

Grading Policy: Assignments throughout the course are allotted a certain number of points which reflect the amount of work expected for each element. The total number of available points is 200** with the breakdown being provided below. After determining the total number of points accumulated, grades will be assigned in the standard +/- manner.

Academic Integrity: This course will adhere to the CSU Academic Integrity Policy as found in the General Catalog, Section 1.6, as well as the Student Conduct Code. If it is discovered you have submitted work that you do not fully understand or which represents the work of another student or external source, that is justification for failing the assignment, failing the course, and/or facing disciplinary action by the university. At a minimum, violations will result in a grading penalty in this course and a report to the Office of Conflict Resolution and Student Conduct Services.

Classroom Expectations: I will do my best to support and guide your academic endeavors during the semester but ultimately, you are expected to take responsibility for your learning. Regular communication is crucial during this journey and that goes both

ways. I promise to provide you with relevant feedback and will regularly contact you but I cannot help you if I do not know where you are struggling so please, do not hesitate to contact me in turn. This classroom is a safe space where your presence is valued both in the classroom and online as necessary. You are expected to actively participate in all course discussions and assignments. During this class, you will be working regularly with other engineers - from classmates to upperclassmen and working professionals. You may encounter different perspectives or conflicting approaches. These are important learning opportunities that lead to more robust solutions. All opinions are important. You are expected to be respectful and considerate at all times. If you have concerns or constructive feedback, please email me.

Special Accommodations: We are committed to creating a safe, fair, and inclusive learning environment. If you are experiencing difficult situations that are affecting, or could potentially affect, your academic success, please contact **Student Disability Center** as soon as possible (<https://disabilitycenter.colostate.edu/>), Tilt Building Room 121, (970) 491-6385. Difficult situations can include issues such as medical, mental health, personal or family crisis, illness, or injury. If students request extensions or considerations due to difficult situations, I typically require documentation from SCM. In addition, I urge students to contact me in advance of deadlines about such issues. Late work will not be accepted without prior agreement.

Statement of Inclusivity: It is my intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

Your suggestions about how to improve the value of diversity in this course are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

Assignment Overview*

Project Name	Project Breakdowns	Details
Wind Farm	Initial Project Proposal (20pts)	Group project to provide technical material to supplement a project bid
		Rubric is available on Canvas.
	Community Forum (15pts)	Guest speakers invited to model a community forum on October 6
		Briefly present project proposal and receive feedback for final proposal
Final Report (30pts)	Group project to incorporate community feedback and propose a complete wind farm	
	Rubric will be made available on Canvas when report is assigned.	
Arduino	Project Proposal (20pts)	Brief group report describing your desired project using an Arduino and basic circuit components
		Rubric will be made available on Canvas when proposal is assigned.
	Special Course Attendance (20pts)**	Special courses will be offered in conjunction with OOP students.
		You are expected to attend at least two (10pts each) and write a short summary of lessons learned.
Final Report (30pts)	Complete schedule will be posted to Canvas so you can choose what topics are of most interest.	
	Individual final reports should assess the success and failures of your project.	

		Rubric will be made available on Canvas when report is assigned.
	Demonstration (15pts)	Show off what you have accomplished.
Miscellaneous	Pre-class Survey (5pts)	Complete survey via Canvas
	Class Participation (15pts)	2pts will be deducted for each week lacking participation unless special accommodations are requested.
	Project Notebook (25pts)	Expected to keep a regular log of your research and project ideas as well as other elements specified in class and online rubrics
	Post-class survey (5pts)	Complete survey via Canvas

* Assignment deadlines will be emphasized in class and posted on Canvas. Therefore, regular participation is crucial.

** Special Courses are offered through the department and were put on hold due to COVID last Fall. This requirement is tentative until more information is available.