

ECE 1100 Foundations of Electrical and Computer Engineering
Fall 2023, 1 Credit

Textbook: Any literature related to directions and societal impact of the ECE professions.

Prerequisite: Declared BSEE or BSCpE major

Lectures: Tuesday 3:00 – 3:50 p.m., LIBR 32/CHE 311

Catalog Description: Survey and history of the electrical and computer engineering professions.

Instructor: Dr. Steve Chiu, Professor and Chair of ECE Department, email: stevechiu@isu.edu, Office and Office Hours: LEL 217, by appointment.

TA/Grader: TBD.

Grading: Course grade will be based on 5 assignments (80%) and attendance (20%).

Late Policy: If an assignment cannot be submitted by the deadline, you must contact the instructor **before** the deadline to arrange for a late submission. Otherwise, it will not be accepted and will receive a grade of zero. An allowed late submission will entail a penalty of 10% of the maximum points per delayed day. For example, a submission that is **2** days late and would have received 80 points out of 100 will instead receive $80 - 100 * 10\% * 2 = 60$ points.

Topics Covered:

Emerging areas of ECE (<https://www.ieee.org/about/technologies.html>)

Impact of ECE on mankind and society

Course Learning Objectives – upon completing this course, students will be able to:

1. Demonstrate an understanding of the ECE profession, ethical issues and emerging technical areas.
2. Perform team-based solution development by following stipulated processes and protocols.
3. Recognize the impact of the ECE profession on mankind, society and sustainability.

ABET Student Outcomes – these are specific learning skills that the students attain at the end of the course and that reflect the broader course objectives:

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

How to do well in this class:

It will be necessary to memorize certain essential principles and devices and to practice with them. But memorization alone will not get you a good grade. You need to understand the concepts that we discuss in this class and be able to apply them. Exam questions will not always be based directly on homework problems. You will not be able to successfully prepare for the exams just the night prior to the exams.

Come to class, pay attention, ask questions, then review the material after each class, and work hard on the assignments. You will have copies of the class notes so that you can pay closer attention during class and not have to worry about taking notes. A few days before the exam, go over the notes and summarize them and spend time on your summary. Review the homework solutions also. The emphasis will be on understanding of concepts. I will specify any required references so they do not have to be memorized.

If you missed an exam, you must provide documentation justifying your absence, or you will receive a grade of zero on the exam. In case of illnesses, you must provide written documentation from your physician. There will be no make-up quizzes.

Accessibility Statement

Idaho State University is committed to providing equal opportunity in education for all students. If you have a diagnosed disability or if you believe you have a disability (physical, learning, hearing, vision, psychiatric) that might require reasonable accommodation in this course, please contact the Disability Services Center, Rendezvous Building, Room 125 (282-3599), or at <http://www.isu.edu/ada4isu>. It is the responsibility of students to contact instructors during the first week of each semester to discuss appropriate accommodations.

Any student who feels an accommodation based on the impact of a disability is necessary should talk with me privately to discuss your specific needs and the requirements of the course. You may also contact Disability Services at 282-3599 in the Rendezvous Building, Room 125 to coordinate reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor and Disability Services. Please see their web page at <http://www.isu.edu/ada4isu> for more information about this process.

Academic Dishonesty Statement

Academic dishonesty is unacceptable and will not be tolerated. Homework assignments and exams are designed to be educational, and the process of preparing for and completing them helps to improve your skills and knowledge. Actions such as cheating, forgery, plagiarism and collusion in dishonest acts are serious offenses that are inconsistent with this intent, and will significantly diminish the educational value of those experiences. Students who attempt to obtain unearned academic credentials not reflective of their own skills, abilities and knowledge can undermine the value of the ISU degrees earned by their more honest peers. ISU takes such offenses very seriously, and expects that all work you submit will be a result of your own original and independent efforts.

Cheating is the attempted or unauthorized use of materials, information, notes, study aids, technology or communication devices during an academic exercise.

Forgery involves making, adapting, or imitating objects, statistics, or documents with *intent* to deceive.

Plagiarism is the act of presenting another person's ideas, research or writing as your own. Even students who don't intend to plagiarize, but do so by mistake, can suffer undesirable consequences from their unintended action. It is not the *intent*, but only the *fact*, of plagiarism that will be taken into account.

Collusion is an agreement between two or more parties to deceive, mislead, or defraud others to obtain an objective or gain an unfair advantage.

You are expected to read and be familiar with the University's Policy on Student Conduct, located at: <http://www.isu.edu/policy/4000/AA-Academic-Integ-Dishonesty-4000-7-27-15.pdf>. If you are charged with an offense, pleading ignorance of these rules will not be acceptable.

Practices that are acceptable include:

- Getting procedural advice from consultants in the Content Area Tutoring Center.
- Discussing ideas about assignments with fellow students.
- Showing a classmate how to do a *similar* problem, or receiving help in this way.
- Getting help from your instructor.
- Modeling your solution directly after examples given to you by the instructor, or from course materials.
- Doing all of your work by yourself.

Practices that are not acceptable include, but are not limited to:

- Copying from another student during an exam or allowing another to copy from you.
- Unauthorized collaboration on a take-home assignment or exam.
- Using unauthorized notes or other resources during a closed-book exam.
- Using unauthorized electronic devices (e.g., cell phones, laptops) during an exam.
- Taking an exam for another student, or asking or allowing another student to take an exam for you.
- Changing a corrected exam or homework paper and returning it for more credit.
- Asking or expecting your instructor to change your grade "because you knew what you were doing, but didn't or couldn't show it on the exam."
- Asking your instructor to break rules for you in a manner not applied to everyone else in the class.
- Copying (by whatever means) another student's homework or duplicating another student's problem solving steps. This means it is not acceptable to do an assignment by having another student dictate the assignment's solution steps to you, or to let another student do things for you.
- Failure to acknowledge collaborators on homework and laboratory assignments.
- Submitting another student's work, in whole or in part, as your own on an assignment or exam.
- Copying (electronically or by hand) someone else's computer file, modifying it, and handing it in as your own work.
- Having someone load his/her assignment into the computer, then modifying it and handing it in as your own work.
- Allowing another person to copy all or part of your work, to hand in as their own. Thus, you should not provide a paper or electronic copy of your work to a classmate to use as a "reference" in doing their work. And you should not post your work on a website or an electronic bulletin board, or similar medium, for reference by others.

Penalties for such offenses on an exam, quiz, written assignment, or other required submission can include a failing grade for that assignment *or the course*, suspension or expulsion from the University, and/or a notation on your official transcript indicating academic dishonesty, and will be reported as required by ISU's Policy on Student Conduct.

Statement on Success

Success in this course depends heavily on your personal health and wellbeing. Recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. Your other instructors and I strongly encourage you to reframe challenges as an unavoidable pathway to success. Reflect on your role in taking care of yourself throughout the term, before the demands of exams and projects reach their peak. Please feel free to reach out to me about any difficulty you may be having that may impact your performance in this course or campus life as soon as it occurs and before it becomes too overwhelming. In addition to your academic advisor, I strongly encourage you to contact the many other support services on campus that stand ready to assist you.

Statement on Services

ISU Counseling and Testing Services (CATS) would like to remind all students who are enrolled in the current semester (part-time or full-time) they are eligible for free, confidential counseling services. CATS offers individual, group, and couples counseling, as well as Biofeedback Training. We also offer crisis intervention services Monday through Friday from 8-5.

Locations:

Pocatello: Graveley Hall, 3rd floor of the south side. To schedule an appointment call 208-282-2130 or just stop by. Walk-ins are welcome Monday-Friday from 8am - 4pm.

Idaho Falls: Bennion Student Union, 2nd floor, Room 223. Please call 208-282-7750 to schedule an appointment.

Academic Freedom and Responsibility Syllabus Statement

In carrying out its educational mission, Idaho State University is committed to adhering to the values articulated in Idaho State Board of Education Policy III.B. Membership in the academic community imposes on administrators, faculty members, other institutional employees, and students an obligation to respect the dignity of others, to acknowledge the right of others to express differing opinions, and to foster and defend intellectual honesty, freedom of inquiry and instruction, and free expression on and off the campus of an institution.