Course Syllabus

ELCT 101 – Electrical and Electronic Engineering

Course Coordinator

Undergraduate Program Committee

Catalog Description

Introduction to the profession of electrical engineering and the wide range of sub-disciplines that make electrical engineering so impactful in the world today.

Course Delivery Structure:

Lectures

Credit Hours 1

Prerequisite(s) by course

none

Prerequisite by topics

none

Required Textbooks

None

Recommended reading:

Instructor provided notes/materials

Learning Outcomes:

Students who successfully complete the course will at least be able to:

1. Discuss the impact and future potentials of electrical engineering (EE) in society
2. Know the areas of concentration within EE and the connection of EE with other science, engineering, and other fields
3. Describe the value the institute of electrical and electronics engineering (IEEE), many of its societies, the IEEE membership, and IEEE standards bring for their professional growth and continuous learning.
4. Illustrate ethical issues and responsibilities in EE

Course Topics:

* Illustrations of high-impact and/or pervasive EE technologies in society
* Introduction to the various areas of concentration within EE
  + Power and energy systems, renewable energy
  + Cyber-physical systems, controls, and automation
  + Wireless Communications, radio frequency and optical systems
  + Micro and nano electronic materials and devices, transistors and integrated circuits
  + Medical electronics, sensors, and bioelectronics
  + Intelligent and autonomous systems such as self-driving cars and aircraft
  + Synergy with other engineering and computing disciplines
* Introduction to the IEEE, its societies, standards, and IEEE membership

Course Contribution to ABET Student Outcomes:

None

Course Communications

The course lectures will be delivered in person in the classroom. Students are expected to take notes.

The course will have a blackboard page. Course notes will be posted in that blackboard page. All reading assignments will be posted there along with their due dates.

All communication/announcements will be made through the above-mentioned blackboard page.

Student-to-Instructor (S2I) interaction. Students can contact instructor via email (provided in this syllabus), telephone and/or Teams/in-person meeting.

Student-to-Student (S2S) interactions include email correspondence, Blackboard chat or Discussion board.

Student-to-Content (S2C) Interactions include access to posted lectures on Blackboard as well as reading materials posted in Blackboard and taking notes in class.

Course Policies

Attendance

Students are expected to attend each scheduled class meeting, to be on time, and to be prepared for each class session, attendance will be taken.

Assignment Submission

Assignments are always due before class starts on the day noted. Late assignments will be accepted only in cases of emergency.

**Make-Up Test/Exam/Assignments**

You are expected to make every effort to submit all required assignments and take all required test/exam as scheduled. Missed test will receive a grade of zero points. Make-up test or assignments may be given for legitimate excusable absences, including illness of the student, accident, mandatory court appearance, military duty, or funeral attendance. Documentation of the circumstances will be required. If you know in advance you will miss an assignment or test, please notify the instructor in advance. If you are ill or if other extenuating circumstances cause you to miss an assignment or test, you must notify the instructor as soon as possible.

Make-up exam format and questions for excused absences may be different than the original exam.

Expectations for Classroom Behavior

Please be respectful of each other, the instructor, and any guest presenters while in class. We are all here to learn! Any disrespectful or disruptive behavior may result in your referral to the Office of Student Judicial Programs.

Expectations of the Instructor

The instructor is expected to facilitate learning, to answer questions appropriately, to be fair and objective in grading, to provide timely and useful feedback on assignments, to maintain adequate office hours, and to treat students respectfully.

**Academic Integrity**

*As a student of the University of South Carolina, you agree to comply with the University Code of Conduct (*[*www.sc.edu/policies/ppm/staf626.pdf),*](http://www.sc.edu/policies/ppm/staf626.pdf)*Honor Code (*[*www.sc.edu/policies/staf625.pdf*](http://www.sc.edu/policies/staf625.pdf)*), Carolinian Creed (*[*www.sc.edu/policies/staf102.pdf*](http://www.sc.edu/policies/staf102.pdf)*), and all Other policies of the University of South Carolina.*

*You assume full responsibility for the content and integrity of the academic work you submit. The guiding principle of academic integrity shall be that your submitted work, examinations, reports, and projects must be that of your own work.  Prohibited behaviors include plagiarism, cheating, falsification, and complicity.*

*Lectures and course materials (which is inclusive of presentations, tests, exams, outlines, and lecture notes) may be protected by copyright. Homework solutions may be copyrighted by the publisher. You are encouraged to take notes and utilize course materials for your own educational purpose. However, you are not to reproduce or distribute this content without expressed written permission from the instructor. This includes sharing course materials to online social study sites like Chegg, CourseHero and other services. Students who publicly reproduce, distribute or modify course content may be in violation of the university’s Honor Code’s Complicity policy.*

*Deviation from these expectations will result in referral to the Office of Academic Integrity. Students found responsible for violating the Honor Code will be subject to non-academic penalties by the Office of Academic Integrity, as well as an academic penalties ranging from a zero on the assignment to a failing grade in the course.*

*When a student is uncertain as to whether his/her conduct would violate the Honor Code, it is the responsibility of the student to seek clarification from the instructor or the Office of Student Conduct and Academic Integrity*[*www.sc.edu/academicintegrity*](http://www.sc.edu/academicintegrity)

**Accommodating Disabilities**

*The University of South Carolina provides high-quality services to students with disabilities, and we encourage you to take advantage of them. Students with disabilities needing academic accommodations should register with and provide documentation to the Student Disability Resource Center in Close-Hipp 102 or 803-777-6142, TDD 803-777-6744, email* [*sasds@mailbox.sc.edu*](mailto:sasds@mailbox.sc.edu)*. Discuss with the instructor the type of academic or physical accommodations you need.*

Health

Students are expected to comply with all university health and safety guidelines including those about COVID-19. For current COVID-19 guidelines, visit <https://sc.edu/safety/coronavirus/safety_guidelines>.

Diversity and Inclusivity Statement

The university is committed to a campus environment that is inclusive, safe, and respectful for all persons, and one that fully embraces the Carolinian Creed. To that end, all course activities will be conducted in an atmosphere of friendly participation and interaction among colleagues, recognizing and appreciating the unique experiences, background, and point of view each student brings. You are expected at all times to apply the highest academic standards to this course and to treat others with dignity and respect.

**Writing Center** *(*[*http://artsandsciences.sc.edu/write/university-writing-center*](http://artsandsciences.sc.edu/write/university-writing-center)*)*

*No matter what you choose to do after your college career, you can’t escape spoken or written communication (emojis won’t help you at work). The University Writing Center is an important resource you should use! It's open to help any UofSC student needing assistance with a writing project at any stage of development. The main Writing Center is in Byrnes 703.*

**University Library Resources** *(*[*www.sc.edu/libraries*](http://www.sc.edu/libraries)*)*

* *University Libraries has access to books, articles, subject specific resources, citation help, and more. If you are not sure where to start, please Ask a Librarian! Assistance is available at*[*www.sc.edu/libraries/ask*](http://www.sc.edu/libraries/ask)*.*
* *Remember that if you use anything that is not your own writing or media (quotes from books, articles, interviews, websites, movies – everything) you must cite the source in IEEE format (*[*https://ieeeauthorcenter.ieee.org/wp-content/uploads/IEEE-Reference-Guide.pdf*](https://ieeeauthorcenter.ieee.org/wp-content/uploads/IEEE-Reference-Guide.pdf)*).*

Recommended Study Habits

* Read the assigned material before class.
* Bring thoughtful questions to class for discussion.
* Prepare for the exam in study groups.
* Take notes during class discussions and while completing reading assignments.

Deviations

Minor deviations from the syllabus are a normal part of any adaptive teaching and learning process.