*** All Course Videos Posted in Modules Tab to the Left***

Instructor: Dr. Pamela Dickrell, 352-392-9672, pld@ufl.edu

Peer Tutors/Graders Help Hours: Our course tutors/graders will offer online help hours, each session will have virtual assistance for students. All peer mentor sessions are for help with both calculation-based problems and Arduino Build Kit assistance. Online help hours will be held using the 'Conferences' tool within our Canvas course shell. You can attend any mentor hours for help, not just the one with your grading range.

Peer Mentor Tutoring Hours (online): TBA first day of class, at least 6 hours per week

Course Description: Introduces the theory and practice of electrical engineering for those not majoring in electrical engineering. Discusses circuits machines electronics and systems.

Course Pre-Requisites / Co-Requisites: Prereq: MAC 2313 and PHY 2049

Course Objectives:

1) Become familiar with common engineering circuit components.

2) Understand role of circuits across engineering majors for future multidisciplinary courses or projects.

3) Learn techniques to solve open-ended engineering challenges.

4) Understand core equations and numerical problem-solving techniques of introductory circuits.

5) Connect circuit theory and equations to practice and builds with physical circuits components.

Material & Supply Fees: none

Textbook & Hardware/Software: There are two required items for this course, the first is considered the textbook requirement for this course and is available through Amazon (or Arduino.cc). The second is your laptop with a web camera and microphone for Proctor-U supervised online exams. The two items are described below:

Required Item 1) Arduino Starter Kit - English Official Kit With 170 Page Book: Each student should purchase their own Arduino Starter Kit. Half of your course homework assignments and some conceptual questions on the exam will be based on built items using the Arduino Kit. The kit is not sold in the UF Bookstore; you need to obtain online from either Arduino.cc or Amazon here:

From Arduino.cc: https://store.arduino.cc/usa/arduino-starter-kit

OR

From Amazon (fast shipping if you have Amazon Prime): https://www.amazon.com/Arduino-Starter-Kit-English-Official/dp/B009UKZV0A/ref=sr_1_3?s=electronics&ie=UTF8&qid=1525786729&sr=1-3&keywords=arduino+starter+kit&dpID=414essH-EwL&preST=_SX300_QL70_&dpSrc=srch

You only need one kit, so order from one place or the other, just remember you need it in hand by the end of the first week of class!

This kit is awesome by the way, if you ever wanted to get into Arduino or tinkering/inventing, it is very easy to use and once you get started, you can build and create all kinds of small electronic items.

Required Item 2) Laptop with web camera and microphone Proctor-U tested well ahead of each exam: You will need your own laptop to use your Arduino Kit as well as take course exams, which are proctored online using Proctor-U. You will need to make sure it has a web camera and microphone for use for Proctor-U (built in or external). Well before exam 01, you need to read, re-read, register with proctor-u, and actively test out your computer, microphone, camera, planned exam taking location, and internet using this Proctor-U test taker resources and getting started page as a guide: https://www.proctoru.com/proctoru-live-resource-center

Recommended Reading: Will be announced with each homework.

Assignment Due Dates: Will be posted in the Canvas calendar for each assignment.

Exams: Exams are held online using Proctor-U web proctoring services. There are three exams in the course, each exam is 60 minutes long. Exams will total 60% of your grade. Exams will be multiple choice (no partial credit), to reflect practice FE Exam questions in basic circuits. Well before exam 01, register with Proctor-U, and actively test out your computer, microphone, camera, planned exam taking location, and internet.

ProctorU is a live online proctoring service that allows you to take your exam from the comfort of your home. You will need to schedule your proctoring session at least 72 hours in advance to avoid any on demand scheduling fees. Creating a ProctorU account is very simple. All you will need to do is visit go.proctoru.com. Proctor-U also provides free technical support to ensure you have the best testing situation possible. That is available at www.proctoru.com/testitout On this page you will also be able to test your equipment, learn about what to expect during your proctoring session, and ask any questions you may have about the proctoring process with a ProctorU representative. In order to use ProctorU you will need to have a high-speed internet connection, a webcam (internal or external), a Windows or Apple operating system, and a government-issued photo id. ProctorU recommends that you

visit proctoru.com/testitout prior to your proctoring session to test your equipment. For additional technical services needed before your exam, you can click on the button that says “connect to a live person.” Test Taker Walk Through
Video URL: https://vimeo.com/107066503

Calculator for Exams: Only non-graphing calculators permitted on exams, you can use a two-line scientific calculator. It should not be a model with a graphing screen, only 2-3 typed lines for calculations. (Please do not try to take the exam with a graphing calculator, you will not be allowed to use it, Proctor-U will consider it a mark of cheating, they are screening and will ask you to hold up your calculator as part of the process.)

Homework: Homework will make up 40% of your grade. Late assignments are not accepted for credit. The summer A semester moves very fast, so you need to keep up with assignments! There are 4 homework assignments. All homework assignments are due, uploaded into Canvas as noted in the course calendar. In case of misgrade, you have one week from the date the individual assignment grade is posted to discuss that assignment grade with your grader.

Graders: TBA first day of class

Course Topics: Introduction to Electronics, Theory of Electronics, Electric Current, Voltage, Conduction, Resistance, Resistivity, Conductivity, Heat and Power, Wire Gauges, Grounds, Electric Circuits, Ohm’s Law & Resistors, Wheatstone Bridge, Voltage & Current Sources, Measuring Electronics, Combining Batteries, Open & Short Circuits, Kirchhoff’s Laws, Thevenin’s Theorem, Nodal Method, Mesh/Loop Method, AC Circuits, AC and Resistors, RMS Voltage, Capacitors, Inductors, Complex Numbers, Sinusoidal Sources, Power in AC Circuits, Resonant Circuits, Impedance, Wires, Cables, Connectors, Batteries, Switches, Operational Amplifiers, Diodes, Transformers, Motors

Attendance and Expectations: Lecture attendance is not required since all course items are provided or turned in online through Canvas.

You are responsible for scheduling your exams with Proctor-U for the dates and times set forth for each exam in the Canvas course calendar. You must take your exams with Proctor-U on the dates and during the exam hours window specified. It is your responsibility to make sure you have registered with Proctor-U, done their equipment test procedure, and registered for and exam time well ahead of each exam.

Grading Scale:

A = 92 – 100
A- = 90 – 91.99
B+ = 88 – 89.99
B = 82 – 87.99

B- = 80 – 81.99
C+ = 78 – 79.99
C = 72 – 77.99
C- = 70 – 71.99
D = 60 – 69.99

Less than 59.99 will result in an E grade

A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx
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UF Counseling Services: Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, https://counseling.ufl.edu/

- counseling services and mental health services.
- Career Resource Center, Reitz Union, 392-1601, career and job search services.
- University Police Department 392-1111

Students Requiring Accommodations: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu/evals/Default.aspx
Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/

University Honesty Policy: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a

number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Software Use: All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy: There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://registrar.ufl.edu/catalog0910/policies/regulationferpa.html

Other Campus Resources:

Health and Wellness

U Matter, We Care: Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: https://counseling.ufl.edu/ and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Commitment to a safe and inclusive learning environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination.

It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@ufl.edu

Sexual Discrimination, Harassment, Assault, or Violence
If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS) : Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or https://police.ufl.edu/

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://elearning.ufl.edu/

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. https://career.ufl.edu/

Library Support, https://cms.uflib.ufl.edu/ask Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/

Student Complaints Campus*:* https://dso.ufl.edu/documents/UF_Complaints_policy.pdf

On-Line Students Complaints*:* https://distance.ufl.edu/student-complaint-process/