UNIVERSITY OF HOUSTON
Department of Electrical and Computer Engineering ECE 2202 – Circuit Analysis II
Summer Semester 2023

***Course*:** ECE 2202, Sections 11898 and 11899, 2:00 – 4:00pm, MTuWThF, Room CBB 108, 4242 Martin Luther King Boulevard, face-to-face class

Instructor: Dr. Dave Shattuck, Email: dshattuc@central.uh.edu or shattuck@uh.edu
Office: Room N336-D, (4226 Martin Luther King Boulevard, formerly called Engineering Building 1)

Office Phone: 713 743-4422; Mobile Phone: 713-498-6888

Office Hours: Tuesdays and Thursdays 12:30-1:30pm, Mondays and Wednesdays 4-5pm, or by appointment set up by email. Zoom meetings can be scheduled on request, by email. In all cases, it works best if you suggest a time and date in the email message, with your preferences.

Required Text

We will be using the custom-built interactive Top Hat Textbook Circuit Analysis, ISBN 978-1-77330-968-2, along with the Top Hat One Semester, ISBN 978-0-9866151-0-8, for this course.

You can visit the Top Hat Overview (https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview of the system.

An email invitation will be sent to you, but if you do not receive this email, you can register by simply visiting the course website that corresponds with your section of the course: https://app.tophat.com/e/338672

The Join Code is 338672. Your textbook will be applied at checkout for about $40. Should you require assistance with Top Hat at any time, please contact their Support Team directly by way of email (support@tophat.com), the in-app support button, or by calling 1-888-663-5491.

Recommended Materials for Supplementary Self-Study

Sets of past exams and quizzes, as well as self-study materials, are available on the web http://courses.egr.uh.edu/ECE/ECE2202/. Other good circuit analysis textbooks include ones from the following authors: Nilsson and Reidel; Irwin; Alexander & Sadiku; and Hayt, Kemmerly & Durbin.

Prerequisites

The following requirements must be met before enrolling in Circuit Analysis. In each course you must have earned a grade of "C-" or better. Waivers of any of these prerequisites are possible only through a Request for Waiver of Prerequisite/Corequisite of an ECE Course form, available on the web at:
http://www.ece.uh.edu/sites/www.ece/files/forms/waiver_of_prerequisite.pdf

ECE 2201 PHYS 1122

Web Materials and Email

We will be using the Canvas web site available on the web through AccessUH for posting of grades and email sent to the class, and to post certain documents. Please explore both the Canvas site and the course website for materials of interest. We will assume that your UH e-mail alias (StudentName@uh.edu) is pointed to a working e-mail server that you check regularly.

GENERAL INFORMATION

Catalog Description

Circuit Analysis II. Cr. 2 (1-3). Prerequisites: ECE 2201 and PHYS1122. Analysis of electric circuits, including inductors, capacitors, and first order circuits; sinusoidal analysis.

Course Topics

- Thévenin's and Norton's Theorems
- Inductors and Capacitors
- First Order Circuits
- Sinusoidal Steady-State Analysis
- Complex Power

Expected Course Outcomes:

Students who successfully complete this course are expected to meet the following course outcomes.

- Students will add to their knowledge-base in the fundamentals of electrical engineering, especially in the area of circuit analysis, in part by gaining a greater understanding of key engineering concepts, such as equivalent circuits and transform techniques. Students will use this knowledge and understanding to solve circuits problems such as arise in electrical engineering. (ABET Student Outcome 1)
- Students will further develop their basic skills of problem solving and critical thinking by learning techniques such as the systematic writing and solution of simultaneous equations. They will apply this knowledge of mathematics, science and engineering to efficiently solve circuit analysis problems. (ABET Student Outcome 7)
- Students will continue to develop their ability to choose between various approaches and to learn to take systematic approaches to difficult problems, and therefore identify, formulate, and solve engineering problems efficiently. (ABET Student Outcome 1)
- Students will demonstrate an appropriate level of attention to detail and the use of clear, appropriate notation, which will facilitate their ability to communicate effectively with technical colleagues. . (ABET Student Outcome 3)

Circuit Analysis is designed to introduce you to fundamental concepts in circuit analysis and, more generally, in electrical engineering. Since you will be using these ideas in all aspects of your career as an electrical or computer engineer, both in the classroom and in the workplace, it is important that you learn the conceptual framework presented in ***Circuit Analysis*** as thoroughly as possible.

There is no laboratory formally associated with this class. However, there is a corresponding laboratory course, *Circuit Analysis Laboratory*, ECE 2100, which is usually taken along with ECE 2202 *Circuit Analysis II*. This is a separate course that involves construction and measurement of circuits in the Electronics laboratory.

Academic Honesty Policy
Students in this course are expected to follow the *Academic Honesty Policy* of the University of Houston. It is your responsibility to know and follow this policy. You ***must*** sign the Academic Honesty Statement on the last page of this handout, detach it, and submit it to your instructor by ***Wednesday, June 7, 2023***. If you fail to do this, you may be dropped from the course. See the policy on the web at http://publications.uh.edu/content.php?catoid=44&navoid=15831.

Religious Holy Days
Students whose religious beliefs prohibit class attendance on designated dates or attendance at scheduled exams may request an excused absence. To do this, you are **strongly encouraged** to request the excused absence, in writing, by the fifth class day. Please submit this written request to your instructor to allow the instructor to make appropriate arrangements. For more information, see the catalog at http://publications.uh.edu/content.php?catoid=44&navoid=15699

Students with Disabilities
Students with recognized disabilities will be provided reasonable accommodations, appropriate to the course, upon documentation of the disability with a Student Accommodation Form from the Justin Dart, Jr. Student Accessibility Center. For more information, see the web at https://uh.edu/accessibility/ .

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713 743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. Also, there is no appointment necessary for the "Let's Talk" program, which is a drop-in consultation service at convenient locations and hours around campus. https://uh.edu/caps/outreach/lets-talk/index.

Homework
There will be regular homework assignments; the problems will be available on Canvas, and will be submitted there as well. Copies of the homework assignments are also available on the course web page, https://courses.egr.uh.edu/ECE/ECE2202/Homework/.

Since doing homework is important, we will be collecting and grading it. The instructors believe that it is beneficial for students to work together on the homework, in a constructive manner. Some students may be tempted to copy their homework from a fellow student, which obviously

defeats the purpose of doing homework. At the end of the semester, the grades you obtained on your homework assignments will count a few percent toward your final average. We will make the final determination of exactly how much they count at the end of the semester. However, it is important for you to understand that you cannot pass the course on the basis of homework assignment grades. Our experience is that if you are copying the homework, or simply not doing it, you will not do well on the exams and quizzes. Since the exams and quizzes will count far more than the homework assignments, the homework grade cannot raise your average sufficiently for you to pass the course.

Attendance

Attendance at all classes is expected and required. The instructor may take attendance in any class, at any time during the class. The instructor may do this as many times per class period as she/he chooses, without warning. The attendance grade can be included in the grade for the course.

Exams

There will be one midsemester examination, given on the date listed below. This examination will last for 110 minutes. The final exam will last 160 minutes.

Midsemester Exam: Thursday, June 22, 2023, during class

A comprehensive final exam will be given on Thursday July 6, 2023, from 2pm until 5pm.

If you have a conflict with any exam time, you must notify your instructor in writing during the first two weeks of classes.

In addition, ***quizzes*** will be given during the semester. The quizzes will have exam-like questions and will typically last 20 to 40 minutes.

Conduct of Examinations

Exams and quizzes are closed book, closed notes, unless otherwise announced. A one-page crib sheet, using both sides of an 8.5" by 11" sheet of paper, will be allowed for each of the exams. Note that the number of crib sheets will not increase during the semester. You may bring any calculator to the exams and quizzes. ***No makeup examinations will be given.*** **If you have a medical emergency you should call your instructor as soon as possible, preferably before the examination. Medical documentation will be required in all such cases.**

The following items are **not** permitted during the exams: laptop computers; connections to the internet of any kind; communications devices of any kind. For this course, a TI-nspire or equivalent device is considered a calculator, and is therefore permitted. All work must be done on the examination paper provided for that purpose.

Grading Policy

Grades will be determined on the basis of exams, quizzes, attendance, and submitted homework grades with the following range of weights. The actual weights will be fixed at the end of the semester.

Homework	3-10%
Quizzes	10-20%
Midsemester Exam	20-35%
Final Exam	40-60%

Grade Point Rule

The following **approximate** grade point scale will be used in determining your grade. This scale may be modified somewhat, but is included here so that you will have a general idea of how well you are doing in the course. The final grade scale will be determined at the end of the semester.

90 - 100: A's 78 - 89.99: B's 66 - 77.99: C's 54 - 65.99: D's below 54: F

Grade Posting

The course letter grade will be posted on PeopleSoft at the end of the year. Normally, the grades are available about one week after the final exam. The instructor is not allowed to give out grades over the phone or by email. During the semester, grades will be posted on Canvas. Final grades will also be posted on Canvas at the end of the semester; however, the official grade reporting is done on PeopleSoft, not Canvas.

Withdrawal Policy

The withdrawal dates listed in the Academic Calendar will be followed strictly. Please consult this document for appropriate dates. Grades of Incomplete (I) will be given only when a small portion of the course has not been completed for a good reason. If the material has been completed, an "I" grade cannot be given. Detailed information about these issues is available in the *University Catalog*, at http://publications.uh.edu/content.php?catoid=44&navoid=15705 .

Documents on the Web

Some additional materials not on Canvas may be found at: www.ece.uh.edu/courses, by clicking on the 'ECE2202' link on that webpage. Among the documents that are available on the web sites listed above are old exams and quizzes with solutions, current homework assignments, questions asked by previous students with answers, some lecture notes, and some files such as guided solutions to circuits problems, intended to help students in the role of a computer tutor, in a directory called the **Dr_Dave_Project**. Explore and have fun.

COVID-19 Information

Students are encouraged to visit the University's COVID-19 website for important information including diagnosis and symptom protocols, testing, vaccine information, and post-exposure guidance. Please check the website throughout the semester for updates. Consult the (select: Undergraduate Excused Absence Policy or Graduate Excused Absence Policy) for information regarding excused absences due to medical reasons.

Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for disabled students. In accordance with Section 504 and ADA guidelines, UH strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them. If you believe that you have a disability requiring an academic adjustments/auxiliary aid, please contact the Justin Dart Jr. Student Accessibility Center (formerly the Justin Dart, Jr. Center for Students with DisABILITIES).

Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston Undergraduate Excused Absence Policy and Graduate Excused Absence Policy for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to military service, religious holy days, pregnancy and related conditions, and disability.

Recording of Class

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the Justin Dart, Jr. Student Accessibility Center. If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with *anyone* without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

UH Email

Please check and use your Cougarnet email for communications related to this course. To access this email, login to your Microsoft 365 account with your Cougarnet credentials.

Academic Honesty Policy

High ethical standards are critical to the integrity of any institution, and bear directly on the ultimate value of conferred degrees. All UH community members are expected to contribute to an atmosphere of the highest possible ethical standards. Maintaining such an atmosphere requires that any instances of academic dishonesty be recognized and addressed. The UH Academic Honesty Policy is designed to handle those instances with fairness to all parties involved: the students, the instructors, and the University itself. All students and faculty of the University of Houston are responsible for being familiar with this policy.

Title IX/Sexual Misconduct

Per the UHS Sexual Misconduct Policy, your instructor is a "responsible employee" for reporting purposes under Title IX regulations and state law and must report incidents of sexual misconduct (sexual harassment, non-consensual sexual contact, sexual assault, sexual exploitation, sexual intimidation, intimate partner violence, or stalking) about which they become aware to the Title IX office. Please know there are places on campus where you can make a report in confidence. You can find more information about resources on the Title IX website at https://uh.edu/equal-opportunity/title-ix-sexual-misconduct/resources/.

Security Escorts and Cougar Ride

UHPD continually works with the University community to make the campus a safe place to learn, work, and live. Our Security escort service is designed for the community members who have safety concerns and would like to have a Security Officer walk with them, for their safety, as they make their way across campus. Based on availability either a UHPD Security Officer or Police Officer will escort students, faculty, and staff to locations beginning and ending on campus. If you feel that you need a Security Officer to walk with you for your safety please call 713-743-3333. Arrangements may be made for special needs. Parking and Transportation Services also offers a late-night, on-demand shuttle service called Cougar Ride that provides rides to and from all on-campus shuttle stops, as well as the MD Anderson Library, Cougar Village/Moody Towers and the UH Technology Bridge. Rides can be requested through the UH Go app. Days and hours of operation can be found at https://uh.edu/af-university-services/parking/cougar-ride/.

Syllabus Changes

Please note that the instructor may need to make modifications to the course syllabus. Notice of such changes will be announced as quickly as possible through an email message.

Helpful Information

Coogs Care: https://uh.edu/dsa/coogscare/

Student Health Center: https://www.uh.edu/healthcenter/

Academic Honesty Statement

I have read the University of Houston Academic Honesty Policy available on the web at http://publications.uh.edu/content.php?catoid=44&navoid=15831 I agree to abide by the provisions of this policy. I understand that academic honesty is taken very seriously and, in the cases of violations, penalties may include suspension or expulsion from the University of Houston. I understand that it is a violation of the policy to do work on quizzes and exams while communicating in any way with anyone. The only exception is that I may communicate with the course instructors during quizzes and exams.

Name: (Please print) _____

Signature: _____

Date: _____

I understand the prerequisites for this course that are listed in this syllabus. I certify that I have appropriate credit for these prerequisites, or have received a waiver of them from Dr. Trombetta.

Name: (Please print) _____

Signature: _____

Date: _____

Print your name clearly, sign and date it. Then, submit it to your instructor by **Wednesday, June 7, 2023**. If you fail to do this, you may be dropped from the course.