UNIVERSITY OF HOUSTON  
Department of Electrical and Computer Engineering  
ECE 2201 – Circuit Analysis I  
Fall Semester 2020

Course: ECE 2201 Section Numbers (also called the Class Numbers) 16229/17150, 4:00 – 5:30pm, TuTh, synchronous online course  
ECE 2201 Section Numbers (also called the Class Numbers) 16230/17151, 1:00 – 2:30pm, TuTh, synchronous online course

Instructor: Dr. Dave Shattuck, Email: shattuck@uh.edu or dshattuc@central.uh.edu  
Office: Room N336-D (This is in 4726 Calhoun Road, however, this is only given for historical purposes. I will not be in this office during the Fall 2020 semester.);  
Office Phone: (713) 743-4422; Mobile Phone: (713) 498-6888

Office Hours: MTuTh 10:30am – noon, or by appointment by sending an email to the address above. In that email, please suggest a time and date that would be good for you, and I will see what I can do. For these posted office hours, I expect to respond to emails, phone calls, and text messages. Individual or group Zoom meetings can be set up based on issues that arise from those messages.

Required Text  
We will be using the custom-built interactive Top Hat Textbook Circuit Analysis, ISBN 978-1-77412-150-4, 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 to get you up and running on the system.

An email invitation will be sent to you, but if don’t receive this email, you can register by simply visiting the course website that corresponds with your section of the course:  
https://app.tophat.com/students/009134 for the 4-5:30pm section and  
https://app.tophat.com/students/765339 for the 1-2:30pm section.  
Note: our Course Join Code for the 1-2:30pm section is 765339, and for the 4-5:30pm section is 009134.

Your textbook will be applied at checkout for $65. With tax, this will be approximately $68.69. Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, 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, as described in this document. In addition, you need to get the required textbook. Other good circuit analysis textbooks include ones from the following authors: Nilsson and Reidel; Irwin; Alexander & Sadiku; and Hayt, Kemmerly & Durbin.
Prerequisites and CFORI requisites
The following requirements must be met before enrolling in Circuit Analysis. In each course you must have earned a grade of "C-" or better, except the English courses for which a "D-" or better is required. 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

Prerequisites
ENGI 1100 or equivalent
ENGI 1331 or equivalent

Credit For or Registration in (CFORI) Requisites
MATH 3321 – Engineering Mathematics
PHYS 1322 – University Physics II
MATH 2433 – Calculus III
PHYS 1122 – Physics Laboratory II

Synchronous Online Courses
This course is being offered in the Synchronous Online format. Synchronous online class meetings will take place according to the class schedule. There is no face-to-face component to this course. In between synchronous class meetings, there may also be asynchronous activities to complete (e.g., discussion forums and assignments). This course will have a final exam per the University schedule. The exam will be delivered in the synchronous online format, and the specified date and time will be announced during the course. Prior to the exam, descriptive information, such as the number and types of exam questions, resources and collaborations that are allowed and disallowed in the process of completing the exam, and procedures to follow if connectivity or other resource obstacles are encountered during the exam period, may be provided.

Web Materials and Email Issues
Email communications related to this course will be sent to your Exchange email account which each University of Houston student receives. The Exchange mail server can be accessed via Outlook, which provides a single location for organizing and managing day-to-day information, from email and calendars to contacts and task lists. Exchange email accounts can be accessed by logging into Office 365 with your Cougarnet credentials or through Access UH. They can also be configured on IOS and Android mobile devices. Additional assistance can be found at the Get Help page.

We will be using the Blackboard Learn web site available on the web through AccessUH for posting of grades and email sent to the class, and to post certain documents. Many other documents and handouts, including an extensive set of old exams and quizzes with solutions, will be available on the course website at http://courses.egr.uh.edu/ECE/ECE2201/. Please explore both the Blackboard site and the course website for materials of interest. The University of Houston is committed to student success, and provides information to optimize the online learning experience through our Power-On website. Please visit this website for a comprehensive set of resources, tools, and tips including: obtaining access to the internet, AccessUH, and Blackboard; requesting a laptop through the Laptop Loaner Program; using your smartphone as a webcam; and downloading Microsoft Office 365 at no cost. For questions or assistance contact UHOnline@uh.edu.

We will be using Zoom, or other web platforms, to conduct classes online. A Zoom meeting invitation will be sent to you by email for each class meeting. You will be able to click on the link in that email to join the class meeting.
Recorded 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 Center for Students with Disabilities. 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.

Syllabus Changes
Due to the changing nature of the COVID-19 pandemic, please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible through an email sent to the class.

Helpful Information

COVID-19 Updates: https://uh.edu/covid-19/

Coogs Care: https://www.uh.edu/dsaes/coogscare/

Laptop Checkout Requests: https://www.uh.edu/infotech/about/planning/off-campus/index.php#do-you-need-a-laptop

Health FAQs: https://uh.edu/covid-19/faq/health-wellness-prevention-faqs/

Student Health Center: https://uh.edu/class/english/lcc/current-students/student-health-center/index.php
GENERAL INFORMATION

Catalog Description
Circuit Analysis I. Cr. 2 (1-3). Prerequisites: ENGI 1331 and credit for or concurrent enrollment in MATH 2433, MATH 3321, PHYS 1122 and PHYS 1322. Electric circuit analysis techniques. Analysis of resistive circuits, including node voltage and mesh current methods, and Thevenin and Norton equivalent circuits.

Course Topics
• Voltage, Current, Power
• Kirchhoff’s Laws and Ohm’s Law
• Circuit Analysis Concepts
• Systematic Equation Writing
• Thévenin’s and Norton’s Theorems

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 e)
• 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 a)
• 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 e)
• 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 g)

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 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 typically taken along with ECE 2202 Circuit Analysis II. This is a separate course that involves construction and measurement of circuits in the Electronics laboratory. The second section number for ECE 2201 course, which is 15569 this semester and labeled “laboratory”, is a requirement reflecting that more time is set aside for working problems during lecture in this course than in a typical 2 credit-hour course.
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 syllabus, and submit it to your instructor by Thursday, September 3, 2020. 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=36&navoid=13063.

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=36&navoid=12931.

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 Center for Students with Disabilities. To receive these accommodations, you must request the specific accommodations, by submitting them to the instructor in writing. Students who fail to submit a written request will not be considered for accommodations. For more information, see the web at http://www.uh.edu/csd/.

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.php#hours.

Homework
There will be regular homework assignments. Homework assignments are available on the course web page. Since doing homework is important, we will be collecting and grading it. The instructor believes 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 assignments. 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 he chooses, without warning. The attendance grade can be used in calculating the grade for the course. 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. Additional policies address absences related to military service, religious holy days, pregnancy and related conditions, and disability.

Exams and Quizzes
Exams and quizzes will be conducted online. The exam and quiz problems will be sent to you either by email or through Blackboard. You will need to be able to print these problems out for solving, or load them onto an appropriate tablet type device for solving. In either case, you are responsible for having appropriate equipment for working the problems and then returning them to the instructor by the time and date specified. These exams and quizzes are to be completed without communicating with anyone except the instructor. A shockingly large number of students in the spring semester of 2020 used other student’s solutions, or solutions prepared by other third parties. When discovered, severe penalties can result, which can include penalties up to and including expulsion from the University of Houston.

For this course, if I have reasonable grounds to believe that a student has committed an act of academic dishonesty, I will ask for an academic honesty hearing, and request appropriate penalties. See the Academic Honesty policy on the web at http://publications.uh.edu/content.php?catoid=36&navoid=13063.

There will be two mid-semester examination, given on the dates listed below. These two examinations will last for 90 minutes each, with some time to receive and transmit the exam.

Exam 1: Saturday, October 10, 2020 at 9am
Exam 2: Saturday, November 14, 2020 at 9am

A comprehensive final exam will be given on Wednesday, December 9, 2020 at 11am. The final exam will last 170 minutes. If you have a conflict with any exam time, you must notify your instructor in writing during the first week of classes.

In addition, quizzes will be given during the semester. The quizzes will have exam-like questions and will typically last 30 minutes. They can be given at any time during the class, at the instructor’s discretion.

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.

You are not permitted to communicate with anyone except the instructor during exams and quizzes. For this course, a TI-nspire or equivalent device is considered a calculator, and is therefore permitted for use during exams and quizzes.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>3-10%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10-15%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>15-25%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>15-25%</td>
</tr>
<tr>
<td>Final Exam:</td>
<td>40-50%</td>
</tr>
</tbody>
</table>

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.

- 90.00 - 100: A's (A or A-)
- 78.00 - 89.99: B's (B+, B, or B-)
- 66.00 - 77.99: C's (C+, C, or C-)
- 54.00 - 65.99: D's (D+, D, or D-)
- below 54: F

Interim Undergraduate Grading Policy
Due to the unique and unprecedented challenges associated with the COVID-19 pandemic, the University of Houston has implemented an Interim Undergraduate Grade Policy for undergraduate grades which applies to all undergraduate students in courses offered in all sessions during fall 2020. Under this policy, students have the option of converting final assigned letter grades to S (Satisfactory, applicable to any letter grade from A to D-) or NCR (No Credit Reported COVID-19, applicable to grades of F) on their transcripts. Please visit FAQs for additional information.

Grade Posting
The course letter grade will be posted at the end of the semester. 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 Blackboard. Final grades will also be posted on Blackboard at the end of the semester; however, the official grade reporting is done on PeopleSoft, not Blackboard.

Withdrawal Policy
The withdrawal dates listed in the online 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=36&navoid=12937](http://publications.uh.edu/content.php?catoid=36&navoid=12937).

**Documents on the Web**

Some additional materials not on Blackboard may be found at: [www.ece.uh.edu/courses](http://www.ece.uh.edu/courses), by clicking on the ‘ECE2201’ 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](http://www.ece.uh.edu/courses). Explore and have fun.
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=36&navoid=13063. I agree to abide by the provisions of this policy. This includes doing work on quizzes and exams without communicating with anyone except the course instructor.

Name: (Please print) ________________________________

Signature: ________________________________

Date: ________________________________

Please print this page or write out the above information by hand. Print your name clearly, sign and date it. Then, scan it and submit it to the instructor by email to shattuck@uh.edu, by Thursday, September 3, 2020. If you fail to do this, you may be dropped from the course.