

**UNIVERSITY OF HOUSTON**  
**Department of Electrical and Computer Engineering**  
**ECE 2201 – Circuit Analysis I**  
**Fall Semester 2018**

**Course:** ECE 2201 Class Number 19027, 8:30 – 10:00 am TuTh, CBB 122  
**Instructor:** Dr. Leonard Trombetta, Email: [ltrombetta@uh.edu](mailto:ltrombetta@uh.edu)  
Office: W324 D3; 713 743-4424  
Office Hours: TTh 2:00 – 4:00 pm

**Course:** ECE 2201 Class Numbers 19900, 1:00 – 2:30 pm TuTh, CBB 108  
**Instructor:** Dr. Gulin Aksu, Email: [gaksu@uh.edu](mailto:gaksu@uh.edu)  
Office: N319 Engineering Bldg. 1 (D); Cell Phone: (281) 660-6724  
Office Hours: W 10am - 2pm, or by appointment

Students in any section of the course may attend office hours with any of the instructors.

***Required Text***

You should acquire a legal copy of any edition of "Electric Circuits" from Nilsson & Riedel. There will be regular reading assignments from the textbook.

***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: Irwin, Alexander & Sadiku, and Hayt, Kemmerly & Durbin.

***Prerequisites and CFORl 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](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 (CFORl) Requisites***

MATH 3321 – Engineering Mathematics

PHYS 1322 – University Physics II

MATH 2433 – Calculus III

PHYS 1122 – Physics Laboratory II

### ***Web Materials and Email Issues***

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. We will assume that your UH e-mail alias ([StudentName@uh.edu](mailto:StudentName@uh.edu)) is pointed to a working e-mail server that you check regularly.

## **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
- Inductors and Capacitors

### ***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.

Note that there is a corresponding laboratory course, which is *Circuit Analysis Laboratory*, ECE 2100. This is a separate course that involves construction and measurement of circuits in the Electronics laboratory. You may take ECE 2100 at the same time that you take ECE 2202. Your ECE 2100 instructor will give you information regarding that 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 handout, detach it, and submit it to your instructor by Tuesday, August 28, 2018. If you fail to do this, you may be dropped from the course. See the policy on the web at <http://catalog.uh.edu/content.php?catoid=21&navoid=5723>.

### ***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 Thursday, August 30, 2018. Please submit this written request to your instructor to allow the instructor to make appropriate arrangements. For more information, see the catalog at <http://catalog.uh.edu/content.php?catoid=21&navoid=5543>.

### ***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, by Thursday, August 30, 2018. 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](http://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. [http://www.uh.edu/caps/outreach/lets\\_talk.html](http://www.uh.edu/caps/outreach/lets_talk.html)

### ***Homework***

There will be regular homework assignments. Homework assignments will not be assigned from the textbook. 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 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 she chooses, without warning. The attendance grade can be included in the grade for the course.

### ***Exams***

There will be two examinations, given on the dates listed below. These examinations will last for 90 minutes. The final exam will last 170 minutes.

Exam 1: Saturday, October 13, 2018 at 9am

Exam 2: Saturday, November 10, 2018 at 9am

A comprehensive final exam will be given on Wednesday, December 5<sup>th</sup>, at 11 am. 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 20 to 30 minutes. They will be given at the beginning of the class.

### ***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 forms provided for that purpose.

The Saturday morning exams and the final exam will be held in large rooms. The seats may be randomly assigned, and there might be people from other courses taking exams in the same room at the same time. There may be more than one version of the exam given. These regulations are designed to reduce the opportunity for unfair advantage on the exams so that each person can operate under the same or similar conditions.

**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.

Homework	3-10%
Quizzes	12-20%
Exam 1	12-20%
Exam 2	12-20%
Final Exam:	40-50%

**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**

You may find out your grade in the course on-line using PeopleSoft. 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 in a secure manner, i.e., so that only you will have access to your grades. 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 Academic Calendar section of the *Class Schedule* 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=6&navoid=1077> .

**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**. Explore and have fun.

## Academic Honesty Statement

I have read the University of Houston Academic Honesty Policy available on the web at

<http://catalog.uh.edu/content.php?catoid=21&navoid=5723>

I agree to abide by the provisions of this policy.

Name: (Please print) \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Please detach this page, and submit it to the instructor by Tuesday, August 28, 2018. If you fail to do this, you may be dropped from the course.