

Lecture	301 VAN 9:30-10:45AM, Tuesday & Thursday
Web page	dusty.physics.uiowa.edu/~goree/teaching/29_128_home_page.html
Text & Stuff to Print	<p><i>Recommended:</i></p> <ul style="list-style-type: none"> Basic Electronics: An Introduction to Electronics for Science Students, Curtis A. Meyer, 2nd Ed., www.lulu.com. Horowitz & Hill, The Art of Electronics, 3rd Ed. (2nd Ed. is okay) <p><i>Print:</i> lab manual & HW from course website. B&W printing is okay.</p> <p><i>On Reserve at Sciences Library:</i></p> <ul style="list-style-type: none"> The Art of Electronics by Horowitz and Hill Basic Electronics, by Curtis A. Meyer Introductory Electronics for Scientists and Engineers, Simpson Hands-On Electronics, Kaplan and White
Prerequisites	<ul style="list-style-type: none"> introductory course on electricity and magnetism such as 29:12, 29:18 or 29:28 math: complex numbers, beginning calculus this course helps prepare you for Intermediate Lab
Goal of the course	<ul style="list-style-type: none"> Mission: to train science students, undergrad & grad: <ul style="list-style-type: none"> To make electronic measurements To build small practical circuits To program using standard laboratory software The laboratory is the focus of the learning experience in this course. The lecture prepares students for the lab. This course uses less math than most physics courses.
Software	<ul style="list-style-type: none"> Multisym and Labview software are available in 201 VAN. They are required for several homework sets. The door is locked at 5 pm. Printer problems are common; a workaround is pasting screenshots into a Word document & printing elsewhere.

Standard CLAS Syllabus content:

Departmental Office: 203 VAN, DEO: Frederick Skiff

Hours of preparation: For each semester hour credit in the course, students should expect to spend two hours per week preparing for class sessions

The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall or see the Academic Handbook. <http://clas.uiowa.edu/students/handbook>.

Students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu).

All CLAS students or students taking classes offered by CLAS have, in essence, agreed to the College's [Code of Academic Honesty](#): "I pledge to do my own academic work and to excel to the best of my abilities, upholding the [IOWA Challenge](#). I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled ([CLAS Academic Policies Handbook](#)).

Students with a [suggestion or complaint](#) should first visit with the instructor (and the course supervisor), and then with the departmental DEO. Complaints must be made within six months of the incident (CLAS [Academic Policies Handbook](#)).

A student seeking academic [accommodations](#) should first register with Student Disability Services and then meet with the course instructor privately in the instructor's office to make particular arrangements. See <http://sds.studentlife.uiowa.edu/> for more information.

[Sexual harassment](#) subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI [Comprehensive Guide on Sexual Harassment](#) for assistance, definitions, and the full University policy.

In [severe weather](#), the class members should seek shelter in the innermost part of the building, if possible at the lowest level, staying [clear of windows](#) and free-standing expanses. The class will continue if possible when the event is over. See the [Department of Public Safety website](#)

Instructor:	John A. Goree, 512 Van Allen Hall john-goree@uiowa.edu 319-335-1843
Office Hours:	<ul style="list-style-type: none"> 10:45-12:15 Tu Th If I'm not in my office, look for me in my labs (rooms 555, 518, 501), or in my assistant's office (room 553)

What determines your grade (see also other page):

- Homework 10%, Quizzes 5%, Midterm exam 8%, Final exam 17%, Lab 35%, Project 25%
- Grades are recorded on [ICON](#).

Laboratory:

- 561 VAN, beginning the first week, directed by TA
- Materials required:
 - Lab manual: download PDF from [course website](#)
 - Parts kit: buy from [Engineering Electronics Shop](#)
 - Notebook with bound pages (spiral notebook is ok)
- If you are color blind, tell the TA at the first lab
- Lab reports require significant time, often >>2 hours

Active learning:

- The lecture uses two "active learning," methods, based on research to improve student learning:
 - peer instruction.
 - flipped classroom
- View flip videos (typically 3 X 6 min) before class, on ICON.

Attendance:

- Attendance to the laboratory is required.
- Attendance to lecture contributes to quiz grades.

Quizzes:

- Quiz at 9:30 am sharp. 2 minutes. Papers collected at 9:32 a.m.; If you arrive at 9:32 or later, you will receive a zero, unless you have another class before 9:30.
- Two multiple choice questions, one each based on:
 - recent lecture (prepare by reviewing your notes)
 - flip video (prepare by viewing video)
- 11 quizzes (¾ of lectures – you aren't told which ones).
- To promote attendance, wrong answers receive 1/3 credit

Exams:

- Closed book; lab topics are included.
- Exam topics include:
 - circuits*: identify circuit; draw circuit; explain circuit's operation; choose circuit to use in a given application; draw waveforms or frequency response curves; calculate: component values, voltage, current, power, gain, attenuation, roll-off frequency, truth-tables
 - measurement methods*: explain method; identify method; calculate parameters when given waveform.
 - does not include software topics (Multisym, Labview)*
- Midterm questions: ¾ conceptual ¼ calculation & derivation
- Final exam covers the entire course, and is harder than midterm:
 - 1/3 conceptual questions
 - 2/3 calculation, derivation & circuit design (like HW).

Project:

- Design, build and measure a circuit of your own.
- There are no lectures, no regular labs during this period
- 5-minute presentation in class on your proposed project.
- You are responsible for finishing the project on time and paying for your supplies.

Collaboration:

- Collaboration is allowed on homework.
- Final Project must be your own work.

#optional makeup lab meets in lab. There is no quiz that day, but you are still responsible for the assigned flip videos.