

Lecture	70 VAN 9:30-10:45AM, Tuesday & Thursday
Web page	http://dusty.physics.uiowa.edu/~goree
Text & Stuff to Print	<ul style="list-style-type: none"> • <i>Recommended:</i> Basic Electronics: An Introduction to Electronics for Science Students, Curtis A. Meyer, 2010, self-published at www.lulu.com. • <i>Recommended & on reserve:</i> Horowitz & Hill, The Art of Electronics, 2nd Ed. <p>Print lab manual, lecture notes & HW from course website.</p>
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
Goal of the course	<ul style="list-style-type: none"> • To train science students, both undergraduate and graduate, to: <ul style="list-style-type: none"> ○ build small practical circuits ○ make electronic measurements. • The laboratory is the focus of the learning experience in this course. The lecture prepares students for the lab. • This course is not highly theoretical. It has less math and less homework than most 100 level physics courses.
Multisim & Computer	<ul style="list-style-type: none"> • Multisim software is available in 201 VAN. It is required for several homework problems. The door is locked at 5 pm. Printer problems are common; one alternative is pasting screenshots into a Word document, saving on a flashdrive & printing elsewhere.
More	<p><u>Departmental Office:</u> 203 VAN, DEO: Mary Hall Reno</p> <p><u>Hours of preparation:</u> For each semester hour credit in the course, students should expect to spend two hours per week preparing for class sessions</p> <p><u>The College of Liberal Arts and Sciences</u> 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. www.clas.uiowa.edu/students/academic_handbook/index.shtml</p> <p>Plagiarism and any other activities when students present work that is not their own are academic fraud. <u>Academic fraud is reported</u> to the departmental DEO and to the Associate Dean for Academic Programs and Services who enforces the appropriate consequences. www.clas.uiowa.edu/students/academic_handbook/ix.shtm</p> <p>Students with a <u>suggestion or complaint</u> should first visit the instructor, then the course supervisor and the departmental DEO. Complaints must be made within six months of the incident. www.clas.uiowa.edu/students/academic_handbook/ix.shtml#5</p> <p>A student seeking academic accommodations should register with <u>Student Disability Services</u> and meet privately with the course instructor to make particular arrangements. For more information, visit this site: www.uiowa.edu/~sds/</p> <p><u>Sexual harassment</u> subverts the mission of the University and threatens the well-being of students, faculty, and staff. Visit www.sexualharassment.uiowa.edu for definitions, assistance, and the full University policy.</p> <p><u>In severe weather</u>, the class members should seek shelter in the innermost part of the building, if possible at the lowest level, staying <u>clear of windows</u> and free-standing expanses. The class will continue if possible when the event is over. (Operations Manual 16.14.1)</p>

Instructor:	John A. Goree 512 Van Allen Hall john-goree@uiowa.edu 319-335-1843
Office Hours:	<ul style="list-style-type: none"> • 10:00 -11:30 Mo Fri • If I'm not in my office, look for me in my labs (rooms 555, 518, 501), or in my assistants' office (room 553)

What determines your grade (see also other page):

- Homework, 7 sets, 10%
- Quizzes 5%
- Midterm exam 8%
- Final exam 17%
- Lab 35%
- Project 25%

Laboratory:

- 561 VAN, beginning the first week, directed by TA
- Lab manual: download available from course website
- You must provide a notebook with bound pages
- If you are color blind, tell the TA at the first lab

Quizzes given in lecture:

- 9:30 am sharp. 2 minutes long. Papers collected at 9:32 a.m.
- Be seated before 9:30. If you arrive after 9:31, you will receive a zero.
- 2 multiple-choice questions based on recent lectures
- 12 quizzes (¾ of lectures)
- To promote attendance, wrong answers receive 1/3 credit

Exams:

- Closed book
- Lab topics are included.
- Exam topics include: (1) *circuits*: identify a circuit; draw a circuit; explain a circuit's operation; choose a 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 (2) *measurement methods*: explain method; identify method; calculate parameters when given a waveform.
- Midterm questions: 90% conceptual, 10% problem-solving.
- Final exam covers the entire course, and is harder than midterm:
 - 30% conceptual questions
 - 70% problem-solving or circuit design (like HW).

Project:

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