Course Syllabus

Jump to Today

EE 230: Electronic Circuits & Systems

Instructor: Long Que, Ph.D. Email: lque@iastate.edu

Office: 2113 Coover Hall, **Office hrs:** 9:00-10:30 and 2:00-3:30 on MWF

- The instructor will usually respond to your emails within 12 hours during the weekdays.
- For general questions and comments, before you begin the course, write to: lque@iastate.edu (mailto:lque@iastate.edu) .
- To access this course during the semester, log into CANVAS using your Iowa State University user name and password at http://www.iastate.edu/ (http://www.iastate.edu/) .
- If you are registered for this course, you will find a link to the course web site on the CANVAS page.

Objectives

After taking this course, the students should gain the knowledge and skills to:

- Analyze and design the circuits with operational amplifiers (ideal operational amplifiers vs. non-ideal operational amplifiers)
- Use Laplace transform to analyze and design filters (first order and second order filters) in s-domain and frequency domain
- Analyze and design oscillator circuits
- Understand the basic operational principles and device physics of diodes, MOSFETs and BJTs
- Analyze and design circuits with diodes, MOSFETs and BJTs
- Design, implement and test some basic circuits using operational amplifiers, diodes, MOSFETs and BJTs in Labs.

Textbooks

7th Edition “Microelectronic Circuits” by Sedra and Smith (Oxford University Press)

Homework: Homework will be assigned through CANVAS. You will submit (not email) the homework through CANVAS. Any uploaded document will be in PDF format, with a title that contains the name of the assignment and your last name. You can either write or type your solutions. If your solutions are written by hand, they should be on white paper. A scanned PDF copy will then be submitted through CANVAS.

Labs: There are a total of ~10 labs including 2 design labs: one per week, starting week 2. You work in teams of two students. Lab reports are required for every student. Should you fail to complete the lab, you can work on the assignment outside regular lab hours, and contact the TA for a demo if needed when you are done.

Quizzes usually will be given at the end of any lecture on Wednesday or Friday. You will have ~9 quizzes. Each quiz should take about 15 minutes to complete.

Exams/Final exam: Three exams (not comprehensive) will be given, about one per month. Two exams will take place during the regular class time. The third exam will take place during the *final exam week* of the semester. All exams are closed book, but one concept sheet is allowed.

Grading procedure: For simplicity, all assignments will be graded on a scale from 0 (lowest -- only for indicating the absence of the assignment) to 100 (highest).

Homework: 20%; Quizzes: 25%; Lab: 30%; Exams: 25% (Final grade will be curved)

Score	Grade
[90,93) [93,100]	- A
[80, 83) [83, 87) [87, 90)	- B +
[70, 73) [73, 77) [77, 80)	- C +
[60, 63) [63, 67] [67, 70)	- D +
[0,60)	F

Late submissions: Late homework will only be accepted within 30 minutes from the deadline. Homework solutions will be posted on CANVAS ~30 minutes after the due date. You are strongly encouraged to complete and submit the homework at least one day prior to the deadline.

Should you encounter technical difficulties when submitting the homework assignment very close to the deadline, please email the assignment to your TA, to get a time-stamped proof that you completed the assignment on time.

A 20% penalty will be applied towards any other late work, except in the case of University approved absences, when adequate extensions will be granted.

All late work should be emailed to the TA in charge of grading your section. Please keep the emails for your records.

Expectations

You are expected to:

1. Attend lectures and labs, and actively participate in the discussions.
2. Prepare for each lecture by reading the material from your textbook of choice (in advance!).

3. Submit assignments on time.
4. Prepare for, and attend, the exams.
5. Dedicate to this class at least 8 hours a week (including in-class time).

Technical Support

CANVAS Technical Support: If you are new to CANVAS, you might want to check out CANVAS's Student Support Site. You can either search for your question or browse through FAQs.

Are you new to online learning? You may want to take a few minutes to browse ISU's e-Learner website. You'll also find useful tips for succeeding in online courses at the Illinois Online Network. If you are new to CANVAS, you may want to explore CANVAS's support site for students. You may also visit ISU's Library Support and Distance Learning for more resources and helpful tips.

Browser Tuning: You can test your browser to see if your machine has all the required programs to run CANVAS properly. You can find "Test Your Browser" link on the main page of your CANVAS site.

If the browser check brings up any problems, correct them before you begin this course. Call the Solution Center (515-294- 4000) if you need help with resolving browser problems.

Contact Information: If you experience a problem that you cannot resolve through CANVAS tutorials, you can contact Engineering-LAS online at **elotech@iastate.edu (mailto:elotech@iastate.edu)** or call them at 515-294-1876 for more information.

Academic Misconduct:

All acts of dishonesty in any work constitute academic misconduct. Online courses are not exception. The Student Disciplinary Regulations (http://policy.iastate.edu/policy/SDR) will be followed in the event of academic misconduct. Depending on the act, a student could receive an F grade on the test/assignment, F grade for the course, and could be suspended or expelled from the University. Academic misconduct includes all acts of dishonesty in any academically related matter and any knowing attempt to help another student commit an act of academic dishonesty. Academic dishonesty includes, but is not limited to each of the following acts when performed in any type of academic or academically related matter, exercise, or activity:

- Plagiarism: Plagiarism is the act of representing directly or indirectly another person’s work as your own. It can involve presenting someone’s speech, wholly or partially, as your; quoting without acknowledging the true source of the quoted material; copying and handing in another person’s work with your name on it; and similar infractions. Even indirect quotations, paraphrasing, etc., can be considered plagiarism unless sources are properly cited. Plagiarism will not be tolerated, and students could receive an F grade on the test/assignment or an F grade for the course. The Iowa State University policy for academic misconduct can be found in the Student Disciplinary Regulations.
- Obtaining Unauthorized Information: Information is obtained dishonesty, for example, by copying graded homework assignments from another student, by working with another student on a take--home test or homework when not specifically permitted to do so by the instructor, or by looking at your notes or other written work during an examination when not specifically permitted to do so.

- Tendering of Information: Students may not give or sell their work to another person who plans to submit it as his or her own work. This includes giving their work to another student to be copied.
- Misrepresentation: Students misrepresent their work by handing in the work of someone else. The following are examples: purchasing a paper from a term paper service; reproducing another person's paper (even with modifications) and submitting it as their own; having another student do their assigned work.
- Bribery: Offering money or any item or service to a faculty member or any other person to gain academic advantage for yourself or another is dishonest.

Students with Disabilities

Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. All students requesting accommodations are required to meet with staff in Student Disability Resources (SDR) to establish eligibility. A Student Academic Accommodation Request (SAAR) form will be provided to eligible students. The provision of reasonable accommodations in this course will be arranged after timely delivery of the SAAR form to the instructor. Students are encouraged to deliver completed SAAR forms as early in the semester as possible. SDR, a unit in the Dean of Students Office, is located in room 1076, Student Services Building or online at www.dso.iastate.edu/dr/. Contact SDR by e-mail at disabilityresources@iastate.edu or by phone at 515-294-7220 for additional information.

Course Summary:

Date	Details	
Wed Sep 5, 2018	HW1 (https://canvas.iastate.edu/courses/52784/assignments/669737)	due by 11:59pm
Wed Sep 12, 2018	HW2 (https://canvas.iastate.edu/courses/52784/assignments/672209)	due by 11:59pm
Wed Sep 19, 2018	HW3 (https://canvas.iastate.edu/courses/52784/assignments/673855)	due by 11:59pm
Wed Oct 3, 2018	HW4 (https://canvas.iastate.edu/courses/52784/assignments/680884)	due by 11:59pm
Thu Oct 11, 2018	HW5 (https://canvas.iastate.edu/courses/52784/assignments/684300)	due by 11:59pm
Wed Oct 17, 2018	HW6 (https://canvas.iastate.edu/courses/52784/assignments/687869)	due by 11:59pm
Wed Oct 24, 2018	HW7 (https://canvas.iastate.edu/courses/52784/assignments/689826)	due by 11:59pm