

Hello dear incoming ECE Freshmen,

Welcome to the UIUC ECE department. People might tell you that this is the world of hard work and of sleepless nights. These people are speaking the near truth. That is why this guide—together with proper planning—will help make your life better and ensure that you still have time to hang out, socialize, flirt around, play DOTA and perhaps give you 7 hours of sleep for your freshman year.

Here are the recommended (please take them for your own sake) courses for your first year.

ECE110	– Introduction to Electrical and Computer Engineering (4 hours)
ECE190	– Introduction to Computing Systems (4 hours)
ECE210	– Analog Signal Processing (4 hours)
ECE290	– Computer Engineering I (3 hours)
PHYS213	– Univ. Physics: Thermal Physics (2 hours)
PHYS214	– Univ. Physics: Quantum Physics (2 hours)
MATH241	– Calculus III (4 hours)
MATH286	– Introduction to Differential Equations Plus (4 hours)
RHET105	– Principles of Composition (4 hours)

You only need to take RHET105 if you *have not* scored at least a 680 for the Verbal section of your SAT.

The norm for the university is to split half the students to take ECE110 for the first semester and the other half to take RHET105. However, no matter what you do: beg, lie, cheat or steal, you **MUST** take ECE110 during your first semester. This is the prerequisite to **ALL** ECE classes. Therefore, if you don't take it, it will set your ECE classes back by one semester. This is definitely not good idea. Usually, when you go for advising during your orientation, speak to your advisor about your tight schedule (you have to complete by 3 years due to tight budget, commitments, scholarship requirements, etc.) and they will usually let you take BOTH RHET105 and ECE110 together during the first semester. It can be done and has been done many times before by many seniors.

Also, speak to *Professor Brunet* if you're not scheduled to take it during your first semester. *Professor Brunet* is quite a good lecturer for the course.

Also, ECE190 is a **MUST** to take during the first semester. Your advisor will probably say that you're crazy, or that you're overloading, and forbid you to take ECE110, ECE190 and maybe RHET105 together. Ignore them. Regardless of the schedule that you get after your advising (you'll usually work a schedule out together with the advisor), when you are registering for classes, just click on ECE190 and register for it, together with ECE110 and RHET105 if you need it. You'll be severely disadvantaged if you do not take ECE190 as ECE290 (which you'll take during the 2nd semester) builds on information done in ECE190.

PHYS213 and PHYS214 are half semester courses, and most people take them together in one semester. The first half of PHYS214 is basic physics on waves and superposition—which you’ll find quite familiar as it is similar to A’ Level physics—while the second half will cover more unfamiliar areas such as quantum. More often, PHYS213 will prove to be harder due to its bad course structure and it being offered during the 2nd half of the semester, where all your other modules get harder as well.

For those who took Further Math for A’ Levels, you will not have to take MATH241.

A typical 1st year schedule will look like:

1st SEMESTER	2nd SEMESTER
ECE110 (4 hours)	ECE210 (4 hours)
ECE190 (4 hours)	ECE290 (3 hours)
MATH241 (4 hours)	MATH286 (4 hours)
RHET105 (4 hours)	PHYS213 (2 hours)
	PHYS214 (2 hours)
	Gen. Ed. of your choice (3 hours)
TOTAL: 16 hours	TOTAL: 18 hours

Here is the list of classes you get credit for if you took the subjects in the A’ Levels:

Biology – Free Elective
 Math C – MATH220 and MATH230
 Further Math – MATH225 and MATH242
 Physics – PHYS211 and PHYS212
 Chemistry – CHEM102, CHEM103, CHEM104, CHEM105
 Economics – ECON102 and ECON103

If anyone took Literature, History and other stuff, it goes towards Free Electives.

It is 8 hours per A’ Level subject taken, so if you took 4 subjects, you are up 32 hours. You need 128 hours to graduate. That’s why it is very possible to graduate in 3 years. Proper planning is needed to make your life easier without taking summer school or overloading. Still, be prepared to work very hard because you are in one of the top engineering schools in the whole of the US and will be competing with some of the smartest brains around. Nevertheless, don’t forget to relax, have some fun and mingle around with the Americans and other International students when you have the time. This is what overseas study is all about.

Good luck!!!

ECE SSA Seniors

TEXTBOOK LIST: (If the course is not listed here, it means either it doesn't require a textbook, OR you will need to buy the notes from the university, OR the textbook is only available in the US)

ECE 190

PATT and PATEL, INTRO TO COMPUTING SYSTEMS 2nd Ed

~ \$40 SGD

ECE 290 (optional textbook for reading ahead)

MANO and KIME, LOGIC & COMPUTER DESIGN FUNDAMENTALS 3rd Ed

~ \$50 SGD

UNDERGRADUATE MINORS:

If you would like to learn more about the undergraduate minors that are available and what the specific course requirements are for those minors, visit this website:

<http://www.provost.uiuc.edu/programs/advising/minors.html/>

Some minors that ECE seniors have taken:

- Business Minor
- Psychology Minor
- Computer Science Minor

USEFUL LINKS:

Schedule Planner:

<http://schedule.illinux.org/>

University Bookstores:

<http://www.uofibookstore.uiuc.edu/>

— Illini Union Bookstore

<http://www.tisbookui.com/>

— T.I.S. College Bookstore

<http://www.bkstr.com/Home/10001-10742-1?demoKey=d/>

— UofI Folletts Bookstore

Website to buy/sell cheap used textbooks:

<http://www.illinibookexchange.com/>

Website to see if the professor for your course is good:

<http://www.ratemyprofessors.com/>