

Computer (Systems) Engineering Majors (CSE/CompE)  
Electrical Engineering Majors (EE)  
PR-ENGIN Students planning to be CSE/CompE or EE Majors  
Students in other majors planning on switching to CSE/CompE or EE

## Registration Notes for Spring 2019

### Summary of Steps to Preregister for Fall 2019 classes (see below for details)

- Pick up a Course Selection Form (CSF) and Curriculum Worksheet (available outside M5)
- Schedule an advising appointment (look for email from your advisor with link to calendar)
- Review your ARR & complete a Course Selection Form
- Meet with your advisor (March 19 – March 29)
- Deliver signed CSF to Ms. Barbara Hastings, Marcus 207
- Enroll in classes once your Enrollment Appointment begins (classes on SPIRE on ~3/18)

### General Information

Undergraduate Programs Office (ECE)  
Ms. Barbara Hastings  
Marcus 207  
413.545.2441  
[hastings@ecs.umass.edu](mailto:hastings@ecs.umass.edu)

Undergraduate Program Director (ECE)  
Prof. Bill Leonard  
Marcus 8B  
413.545.3513  
[leonard@ecs.umass.edu](mailto:leonard@ecs.umass.edu)

Transfer Coordinator (ECE)  
Prof. Dan Holcomb  
KEB 309H  
413.545.6593  
[holcomb@engin.umass.edu](mailto:holcomb@engin.umass.edu)

Study Abroad / Domestic Exchange (ECE)  
Prof. Mike Zink  
KEB 209F  
413.545.4465  
[zink@ecs.umass.edu](mailto:zink@ecs.umass.edu)

Honors Program Director (ECE)  
Prof. Neal Anderson  
Marcus 210E  
413.545.0765  
[anderson@ecs.umass.edu](mailto:anderson@ecs.umass.edu)

Office of Student Affairs (CoE)  
Greg Brown (Dean of Undergraduate Advising)  
Marston 126  
413.545.2035  
[gbrown@acad.umass.edu](mailto:gbrown@acad.umass.edu)

Forms & Documents (ECE)  
<http://ece.umass.edu/undergraduate-students/forms-documents>

### RAC Holds

Everyone has a “service indicator (code-RAC)” on their SPIRE accounts, which prevents enrollment and which can be removed only by meeting with an advisor and turning in a signed Course Selection Form to Ms. Barbara Hastings in Marcus 207.

### Other Holds

If you have any other holds on your SPIRE account, e.g., 10- or 12-semester hold, Probation hold, or Academic Warning hold, contact Bill Leonard. He will need to write an Advising Note and alert the Dean to it. For the 10- or 12-semester hold, you will need to fill out a SAPA form and submit it to the Office of Student Affairs. (A fillable version is located on the ECE website under Forms & Documents.)

## Registration Process

**Step 1. March 2019: Getting Started.** Go to M5 (Marcus Hall, room 5, on the ground floor) to pick up your registration paperwork (a Curriculum Worksheet and a Course Selection Form), which are located near the main door to M5. You also need to sign up for an appointment with your faculty advisor. Most advisors use UMass Apps, so look for a broadcast email with a link for scheduling an appointment. For those advisors who do not use UMass Apps, they will send you an email explaining the procedure you are expected to follow. If you do not receive an email from your advisor, contact Ms. Barbara Hastings for assistance.

**Step 2. Getting ready for your Advising Appointment.** Print and/or review your SPIRE (unofficial) transcript and write each of the grades from your transcript in the appropriate box on your EE or CompE/CSE Curriculum Worksheet. Enter a grade of “TR” or “AP” for all transfer or Advanced Placement courses that are listed as being satisfied on your Academic Requirements Report (ARR). Review your ARR online, but please do not print out the report. When you have completed all of this, write out a draft of your academic plan for next semester.

**Step 3. March 19 – March 29, 2019: Meeting with your Advisor.** Go to your advising appointment prepared with your partially completed Course Selection Form, a copy of your SPIRE transcript (if printed), a completed Curriculum Worksheet and your draft of next semester's academic plan. You and your advisor will finalize your academic plan for Fall 2019, and you will both sign the Course Selection Form. If you need to change the agreed upon academic plan later (e.g., because you failed to meet a minimum grade requirement in one of your classes this semester), you must first consult with your advisor. Also, if you go to your appointment unprepared, don't be surprised if your advisor asks you to reschedule your appointment.

**Step 4. After your Advising Appointment.** Return the signed Course Selection Form to Ms. Barbara Hastings, Marcus Hall, room 207. This is how you will get the RAC service indicator removed from your SPIRE account, which is the ONLY way you will be able to preregister for fall classes. In the event that Ms. Hastings is unavailable, please see Professor Leonard in Marcus 8B.

**Step 5. After your SPIRE Access Period Begins.** Sign up for Fall 2019 classes beginning on the date and time of your Enrollment Appointment, as shown on your Student Center page on SPIRE.

## Academic Requirements Report

This report is used to help with graduation clearance. You should check your Academic Requirements Report (ARR) on SPIRE and contact Bill Leonard if there are any errors or omissions, particularly regarding transfer credits, AP credits, elective courses, and GenEd courses. (Please DO NOT take a printed copy of your ARR to your advising meeting.)

## Admission to the Major

To be admitted to the CSE (class of 2020), CompE (class of 2021 or 2022), or EE major, a student must complete, with a grade of C or better, the following seven courses: MATH 131 and MATH 132, ECE 122, ENGIN 100 or 110 or 111 or 112 or 113 or 114 or 197E; ENGLWRIT 112; and PHYSICS 151 and PHYSICS 152. Further, good standing is required, and your term GPA for the last “regular” term (fall or spring) must be 2.00 or above. NOTE: A grade of C- or below is not sufficient, and the course should be retaken. (Contact Bill Leonard to discuss any exceptions to these requirements, for instance, if you have taken COMPSCI 121 instead of ECE 122, or if you have earned C- in PHYSICS 152. Contact Bill Leonard also if you are not sure exactly when you should repeat a course.)

## Finding the Right Worksheet

There are currently three Curriculum Worksheets for each major within ECE, each with different requirements. The worksheets are labeled using the graduation date, and this works for most people. But you might not be able to use your graduation date to determine which worksheet is appropriate, especially if you entered the major later than most people or if you have changed your graduation date since you entered the major. If you are not sure which set of requirements you are following, contact Bill Leonard.

## Curriculum Planning

Advisors offer assistance, but they do not plan the student's course of study. The Curriculum Worksheets are only guides as not all required courses are offered every semester. *Please inform Bill Leonard now about any problems that arise from anticipated course offerings.* Electronic copies of the Curriculum Worksheets are on the ECE website under Forms & Documents.

## PR-ENGIN majors: Check your Subplan!

If you have not officially entered a major (BS-CSE, BS-CompE, or BS-EE), then you are still PR-ENGIN. This summer, the Office of Student Affairs will review every PR-ENGIN and determine if they are ready to enter a major. Therefore, now is a great time to check your Academic Requirements and make sure that you have the right subplan. On SPIRE, go to Main Menu >> Academics >> Academic Requirements, and scroll down near the bottom. You should see a heading entitled "PR-Engineering". If it is closed, click on the small, green "right arrow" (▶) on the left. In this section, you should see your subplan, e.g., Pre-CSE or Pre-EE. If you do not have a subplan, or if your subplan is wrong, go to [Change of Engineering Track Request](#). (Do NOT use this link to change your major within engineering. For that, go to [Change of Major Request](#).)

## CompE/EE Freshmen: Prerequisites for ECE 201 and 202

The prerequisite for ECE 201 (Analytical Tools for ECE) is MATH 132, and the prerequisites for ECE 202 (Computational Tools for ECE) are both MATH 132 and PHYSICS 151. If you have not completed both of these by the end of the spring semester, then you will need to complete them over the summer in order to stay on track for May 2021 graduation. For information about summer courses, either at UMass Amherst or elsewhere, go to pages 7 and 8.

## CompE/EE Freshmen: ECE 201 vs. MATH 235 and MATH 331

Students in the class of 2022 are not required to take MATH 235 (Linear Algebra) or MATH 331 (Differential Equations). If you have already completed one or both of these Math courses, or if you are interested in pursuing a MATH minor or second major, then you might prefer not to take ECE 201, which covers Linear Algebra, Differential Equations, and Complex Numbers, including how to apply certain mathematical principles and techniques from these areas to solve engineering problems. If you choose to skip ECE 201 and complete both MATH 235 and MATH 331 instead, then you will need to complete a 1-credit independent study in the summer or fall covering Complex Numbers, ECE 296C. You will need to complete all three courses before you take ECE 213 in Spring 2020. Contact Bill Leonard for more information.

## CompE/EE Freshmen: Below C in ECE 122

If you earn below C in ECE 122 (Intro Programming for ECE) this spring, then you should retake it this summer, in order to be admitted to the CompE or EE major as soon as possible. The summer version of ECE 122 is mostly online. Contact Bill Leonard for more information.

### **CompE/EE Freshmen: Below C in ECE 124**

If you earn below C in ECE 124 (Digital Systems) this spring, then you do NOT need to retake it. However, you may retake it this summer to improve your preparation for ECE 231 (Intro Embedded Systems) next spring, as well as for a grade replacement in your GPA. When you retake a class, note that it is the LAST grade, NOT the best grade, that counts in your GPA. Also, note that your grade this spring is NOT replaced on your transcript. It is replaced only in your GPA calculation.

If you fail ECE 124 this spring, then this summer is the best time to retake the course. Contact Bill Leonard for other options. You will likely need to take something over the winter or during the summer, but it does not need to be ECE 124, and it does not need to be this summer. However, now might be the best time to repeat the course. The summer version of ECE 124 is mostly online.

### **CompE Freshmen: COMPSCI 187 vs. ECE 241**

If you have completed COMPSCI 187 (Data Structures), then you do NOT need to take ECE 241 in the fall. However, in order to be prepared for junior level classes in Fall 2020, you will need to take a 1-credit independent study in Fall 2019, Spring 2020, or Summer 2020, namely ECE 296B, Beyond Data Structures.

### **CompE Freshmen: Prerequisites for ECE 241**

The prerequisite for ECE 241 (Advanced Programming I) is ECE 122. If you have taken COMPSCI 121 instead (or if you are taking it now), then you need to earn at least a B in order to be prepared for ECE 241. If you earn below B in COMPSCI 121, then you will need to take ECE 122 over the summer in order to stay on track for May 2022 graduation.

Further, ECE 122 and ECE 241 are now taught using Python, so if you are using COMPSCI 121 to fulfill your ECE 241 prerequisite, then you will need to learn some Python on your own, e.g., over the summer.

### **CompE Freshmen: Prerequisites for ECE 210**

The prerequisites for ECE 210 (Circuits & Electronics I) are MATH 132 and PHYSICS 152. If you have not completed MATH 132 by the end of Spring 2019, then you should complete it by the end of Summer 2019 (in order to be able to take ECE 201 and ECE 202). On the other hand, if you have not completed PHYSICS 152 by the end of Spring 2019, then you do NOT need to take it over the summer, but you will need to postpone ECE 210. (This is different for EE majors.) Specifically, ECE 210 is a prerequisite only for ECE 213, so you can safely postpone ECE 210 until Fall 2020 (and postpone ECE 213 until Spring 2021), which means you can take PHYSICS 152 in Fall 2019. Later courses will need to be rearranged, so contact Bill Leonard to get help developing a new academic plan for graduating in May 2022. For information about summer courses, go to pages 7 and 8.

### **EE Freshmen: Prerequisites for ECE 210**

The prerequisites for ECE 210 (Circuits & Electronics I) are MATH 132 and PHYSICS 152. If you have not completed BOTH of these classes by the end of Spring 2019, then you should complete them by the end of Summer 2019 in order to be on track for May 2022 graduation. (This is different for CompE majors.) For information about summer courses, go to pages 7 and 8.

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### **CompE Sophomores: Passing but below C in ECE 241 last fall**

If you passed ECE 241 last fall, but earned below C, then you are likely not taking COMPSCI 250 this spring. COMPSCI 250 is a prerequisite for ECE 371, Intro. to Security Engineering, which means you cannot enroll in ECE 371 this fall unless you do something this summer. There are two main options for you:

1. Take a Discrete Math / Discrete Structures class outside UMass Amherst this summer. This will fulfill your COMPSCI 250 prerequisite for ECE 371 and also fulfill your graduation requirement, but it will NOT serve as credit for COMPSCI 250. (Only the CS department can review and approve a course as being equivalent to COMPSCI 250.) With this option, you WILL be able to take ECE 371 this fall, but you would NOT be able to take any CS course that requires COMPSCI 250 as a prerequisite. Contact Bill Leonard for a list of courses that might qualify as a suitable Discrete Math course. (You will need to get the course approved. See pages 7 and 8 for more information.)
2. Retake ECE 241 in the fall and postpone ECE 371 until Fall 2020. You will earn a grade replacement in your GPA, and you can take COMPSCI 250 wherever it fits in your schedule. You will likely need to take something over the summer or winter, though you will have some flexibility in deciding which course it is and when you would take it. You would be allowed to take any CS course that requires COMPSCI 250 as a prerequisite, though you are not guaranteed enrollment. You would NOT be able to take ECE 371 this fall.

### **CompE Sophomores: F in ECE 241 last fall**

If you failed ECE 241 last fall, then you will need to retake ECE 241 this summer in order to take junior level ECE classes this fall. In order to take ECE 371 (Intro. Security Engineering) this fall, you will need to also take a Discrete Math / Discrete Structures class this summer. See pages 7 and 8 for more information about summer classes.

### **CompE Sophomores: COMPSCI 187 vs. ECE 241**

If you have completed COMPSCI 187 (Data Structures), in order to be prepared for junior level classes in Fall 2019, you will need to take a 1-credit independent study in Summer 2019, namely ECE 296B, Beyond Data Structures. See pages 7 and 8 for more information about summer classes.

### **CompE Sophomores: Doing poorly / risking an F in COMPSCI 250**

If you are currently enrolled in COMPSCI 250 and doing poorly, and if you have 16 or more credits, then you may safely withdraw from the course. This will avoid the need to repeat the class at a later time for a grade replacement. Note that you will need to take a Discrete Math / Discrete Structures class this summer in order to take ECE 371 (Intro. Security Engineering) this fall. Note also that you will NOT be able to enroll in any CS class that requires CS 250, because any course you take this summer will not actually be equivalent to COMPSCI 250. It will, however, fulfill your graduation requirement for COMPSCI 250 and it will serve as an appropriate prerequisite for ECE 371. You should withdraw through SPIRE by Tuesday, March 19. If you miss the deadline by a day or two, contact Bill Leonard.

### **EE Sophomores: F in ECE 210 last fall**

If you failed ECE 210 (Circuits & Electronics I) last fall, then you will need to take it again this summer in order to stay on track and take ECE 310 (Circuits & Electronics II) in Fall 2019. For more information about summer classes, see pages 7 and 8. Alternatively, you can retake ECE 210 this fall, then take ECE 310 in Fall 2020. You will likely need to rearrange your schedule in order to postpone ECE 310, e.g., taking a Social World elective over the winter term.

## CompE/EE Sophomores: Departmental Honors

The program requirements for departmental honors are:

1. Honors Junior Writing: ENGIN 351H;
2. One Honors Colloquium: ECE 371H or ECE 315H (with accompanying ECE 371 or ECE 315); and
3. Honors Thesis or Project: ECE 499Y (Honors Research) in the fall, with ECE 499T (Thesis) or ECE 499P (Project) in the spring.

Note that ECE 499Y **and** ECE 499T or ECE 499P (i.e., two courses combined) satisfies the requirement for **two** CompE or EE Electives.

There are also admission requirements. For more information, contact Prof. Neal Anderson.

## CSE/EE Juniors: What to do if you fail something

If you failed something last semester (ECE 313, 323, 344, 353, or 373), or if you fail something this semester (ECE 214, 324, 333, 354, or 374), talk to Bill Leonard about what to do. For ECE 214, you may retake it this summer or next spring. For ECE 313 or 323, you might be eligible to take ECE 315 or 310 in the fall, as ECE 313 and 323 are not available. For ECE 333 or 344, you make retake it this fall, but you will need a summer course to get yourself prepared. For ECE 324 or 354, you will need to take ECE 396D (Junior Independent Design Project), which will serve as an alternative prerequisite for ECE 415 (Senior Design Project I). You will also need to take something next spring in order to fulfill your ECE 324 or 354 graduation requirement. NOTE: For most of these options, you will likely need to take a summer or winter course to make room in your schedule. For more information about summer or winter classes, see pages 7 and 8.

## CSE/EE Juniors: Senior Elective Courses

For planning purposes, the following ECE electives will be offered during the next academic year (Fall 2019 or Spring 2020) but they are NOT listed on the back of your Curriculum Worksheet.

### *Fall 2019*

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ECE 597IP: Image Processing  
 ECE 597MD: Post CMOS Devices and Materials  
 ECE 597NE: Nanoelectronics

### *Spring 2020 (tentative for now)*

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ECE 597AP: Antennas & Propagation  
 ECE 597BE: Bioelectronics  
 ECE 597MB: Embedded Systems  
 ECE 597NE: Nanoelectronics

## CSE/EE Seniors: Check SPIRE

Graduating seniors should check their SPIRE Graduation Date and Academic Requirements Report to verify that the Expected Graduation is correct and that all degree requirements will be satisfied at the end of the semester. Contact Bill Leonard with any questions or concerns that you might have. Note that many classes will not automatically fulfill your requirements for Senior Electives on SPIRE, e.g., ECE 544, 547, 597AP, 597ED, and 597MB. Once grades are official in mid May, your ARR will be updated appropriately.

## Pass/Fail Option

You are allowed to make any one course “Pass/Fail”, as long as you change it before Tuesday, March 19. If you are already taking a course that is Mandatory Pass/Fail, then you can still choose another course to be Pass/Fail. Use SPIRE to select Pass/Fail.

A passing grade will show as “P” on your transcript and will not be used to compute your semester or overall GPA, unless the grade improves your GPA. An “F”, however, will appear on your transcript and will be used to compute your GPA. Note that you may NOT use a “P” to fulfill any University or Departmental Requirement, even if a “D” would fulfill the requirement. (The course grade MUST affect your University and Major GPAs in order to be used to fulfill a requirement.) You may revoke the Pass/Fail option at any time before you graduate.

## Withdrawing from a Class

You may withdraw from a class for any reason before midnight on Tuesday, March 19. In other words, you do NOT need anyone’s permission to withdraw from a class. However, make sure that you will still have 12 credits after withdrawing. A “W” will appear on your transcript, but it will not affect your GPA, and it does not count as having been enrolled. (You are allowed two enrollments; a third requires permission.)

## Enrollment Issues / Override Form

Register as soon as your SPIRE enrollment appointment begins, especially if you need a specific class or section. If you cannot enroll in ENGIN 112 or an ECE class for some reason, you can fill out an Override Form. A fillable version is located on the ECE website under Forms & Documents. Download it, fill it out, print it, and take it to Bill Leonard in Marcus 8B or Ms. Hastings in Marcus 207.

## Full-time Student Status

Undergraduate students must take a minimum of 12 credits per semester to retain full-time student status. If you fall below this minimum, you are not eligible for campus housing, risk any financial aid you have been awarded, and may lose any UMass health coverage; see the appropriate campus office if you have any questions. You are also not eligible to work on campus if you are a part-time student.

## Alternative Electives

To find out if you can use a different course as an elective, e.g., your Science elective or a CSE or EE elective, use the Alternative Elective Request form. A fillable version is on the Forms & Documents page.

## Summer Classes at UMass (Amherst)

If you are interested in taking classes at UMass Amherst this summer, request an Enrollment Appointment through SPIRE (navigate to *Enrollment > Summer/Wtr/Non-deg Enroll Appt*). Relevant classes offered through Continuing and Professional Education (CPE) this summer are ECE 122, ECE 124, ECE 201, ECE 202, ECE 210, ECE 214, ECE 241, ECE 331 (formerly ECE 232), ENGIN 351, MATH 132, and PHYSICS 152. There is also a wide variety of Gen Ed courses offered over the summer, and most are completely online, so you don’t need to be in Amherst to take them.

Note that many courses require permission to enroll, so contact the instructor directly, if needed, and they can contact CPE. (Please do not contact CPE directly unless you are having problems.) For ECE classes, you can also contact Bill Leonard to get permission. Note also that you will need to pay for summer courses. You will be billed through the Bursar’s Office. Financial Aid is sometimes available.

## **Summer Classes Outside of UMass Amherst**

If you are interested in taking a class at any other campus, you must request prior approval from the Registrar's Office for General Education courses and from Dean Greg Brown for technical courses (math, science, or engineering). A fillable version of the Prior Approval form is on the ECE web site under Forms & Documents. Do NOT enroll in a course until it is approved. The grade(s) you earn elsewhere will NOT affect your GPA, and you must earn a grade of "C-" or above to earn transfer credit. NOTE: If you are repeating a course outside of UMass Amherst that you have failed at UMass Amherst, you will NOT earn a grade replacement, and the F you have earned will remain averaged into your GPA forever.

Note that you are required to fulfill your Gen Ed requirements with 4-credit courses, so 3-credit courses offered elsewhere generally will NOT be approved. Therefore, it's usually best to fulfill Gen Ed requirements using courses taken at UMass Amherst over the summer (or winter).

## **Transfer Credit**

If you have any problems with transfer credit, email your name, student ID, and course information (course description and syllabus preferred) to Prof. Dan Holcomb at [holcomb@engin.umass.edu](mailto:holcomb@engin.umass.edu).