

## Description of Required Courses

**ECS 101 - Introduction to Engineering and Computer Science (3 credits)** Engineering and Computer Science gateway course. Topics include: discussion of each discipline within the college, technical communication, presentation of technical results, professional behavior, ethics, computers and software packages, problem solving and modeling, data analysis. *Major-specific sections.*

**ECS 102 - Introduction to Computing (3 credits)** Computing Concepts. Principles of programming. Applications of computing concepts to problem solving in engineering and computer science. Laboratory topic will include problem-solving projects from various disciplines within the college. *Only for Computer Science and Systems & Information Science students during the fall semester.*

**CHE 106/107 - General Chemistry Lecture (with Lab) (4 credits)** Fundamental principles and laws underlying chemical action, states of matter, atomic and molecular structure, chemical bonding, stoichiometry, properties of solutions, chemical equilibrium, and introductory thermodynamics. Descriptive chemistry in relation to theoretical principles. (Bioengineering, Chemical and Environmental Engineering Students)

**MAT 193 - Algebra-Infused Precalculus (4 credits)** Polynomial, rational, exponential, and logarithmic functions. Analytical trigonometry and trigonometric functions. Emphasis on algebra throughout the course. A student cannot receive credit for MAT 193 after receiving a grade of C or better in any calculus course. Credit cannot be given for both MAT 193 and MAT 194.

**MAT 194 - Precalculus (4 credits)** Polynomial, rational, exponential, and logarithmic functions. Analytical trigonometry and trigonometric functions.

**MAT 295 - Calculus I (4 credits)** Analytic geometry, limits, derivatives, maxima-minima, related rates, graphs, differentials, exponential and logarithmic functions, mean-value theorem, integration.

**MAT 296 - Calculus II (4 credits)** Integration: the definite integral and applications, trigonometric functions, methods of integration, improper integrals, L'Hospital's rule, infinite series, elementary differential equations, parametric equations, polar coordinates.

## Description of First Semester Non-Technical Courses

**ECN 101 - Introductory Microeconomics (3 credits)** Introduction to microeconomics. Consumer demand, theory of production, markets and prices, social welfare, and related topics. *ECN 101, 102 or 203 required for Mechanical Engineering students only.*

**ECN 102 - Introductory Macroeconomics (3 credits)** Introduction to concepts and methods of economic analysis. Emphasis on such macroeconomic topics as gross domestic product, unemployment, money, and theory of national income. Credit is given for either **ECN 102** or **ECN 203**. *ECN 101, 102 or 203 required for Mechanical Engineering students only.*

**ECN 203 - Economic Ideas and Issues (3 credits)** Foundation of modern Western economic thought. The Model economists have built on this foundation as applied to current issues facing individuals and society. Credit is given for either **ECN 203** or **ECN 101, 102 or ECN 109**. *ECN 101, 102 or 203 required for Mechanical Engineering students only.*

**WRT 105 - Studio 1: Practices of Academic Writing (3 credits)** Study and practice of writing processes, including critical reading, collaboration, revision, editing, and the use of technologies. Focuses on the aims, strategies, and conventions of academic prose, especially analysis and argumentation.

**Elective - Engineering** majors may choose an elective from the Social Sciences or Humanities Division; **Computer Science** majors may choose an elective from the Social Sciences, Humanities, or Natural Science Division.

## Select Elective Courses

During the online Registration process, you may choose one elective (except for Computer or Mechanical Engineering students) from the list of **“Courses Available to First-Year Students”** link located on the FTES; select one course from this list as your first choice course. You should also select up to four choices in case we are unable to place you in your first choice course.

Find the **Additional Course Choices** area on your FTES, page 3. You may choose up to four courses in case we are unable to enroll you in your first choice. No course should be listed twice.

If you receive credit for any required courses on page 1, please select a replacement course from **“Courses Available to First-Year Students”**.

Continue by indicating alternate courses on the remaining rows. We will select another elective to ensure that you meet the full-time status requirement of (12) credits.

## Description of Optional Courses

You may also register for one of the following optional courses. Read through the descriptions for the ECS Academic Excellence Workshop, Marching Band Option, and Army/Air Force ROTC and determine if you wish to register for one.

### **ECS - Academic Excellence Workshop for Calculus courses (1 credit)**

Highly recommended for first-year students because it is designed to supplement the theory taught in Pre calculus - calculus III courses. Problems will incorporate course work. The computational component is designed to reinforce the understanding of concepts through a series of repetitive exercises. Limited enrollment.

If you plan to enroll, on your First Term Enrollment Selections, check the appropriate box, under **Academic Excellent Workshop**.

### **ENI 510 -Syracuse University Marching Band (SUMB) Option “The Pride Of The Orange”**

If you are interested in participating in “The Pride of the Orange,” Syracuse University Marching Band, Please contact the band office at 315-443-2194 or e-mail Fran Moore at [fm Moore@syr.edu](mailto:fm Moore@syr.edu). All members are required to attend band camp the week before classes begin. Rehearsals averaging six hours per week (three evenings, two hours each) occur during the fall semester with additional rehearsals during game week. You are required to register for Marching Band (ENI 510) for one credit. If you are at a maximum credit load, your college will contact the band office for consent.

Find the **Special Categories** area on your First Term Enrollment. Under **SUMB**, mark an X in the appropriate box.

### **MST 101 or ASC 101 - Reserve Officer Training Corps (ROTC)**

If you are interested in enrolling in the Army or Air Force Reserve Officer Training Corps (ROTC), you should have received information in a separate mailing. If you have not received information, please call or e-mail to find out more about the program that interests you. The Army course meets once a week for academics, two leadership lab hours and three physical fitness hours each week, and the Air Force meets for three academic and three physical fitness hours each week. Courses taken through the ROTC program are counted as *additional* courses—they are in addition to the normal course load. AFROTC courses can be taken for credit or noncredit. Army ROTC offers merit based scholarships that pay for full tuition and fees at Syracuse, as well as monthly stipends. Air Force ROTC also offers merit-based scholarships that pay for full or partial tuition and fees, and gives each recipient a monthly stipend. In addition, all Army and Air Force ROTC scholarship winners receive a full Room & Board Leadership Award from the University that can be applied to their room and board fees.

Find the **Special Categories** area on your First Term Enrollment Selections. Under **ROTC**, mark an X in the appropriate box, either **Air Force** or **Army**.

Air Force contact information: Phone number 1-800-295-7456 or 315-443-2461, email [afdet535@syr.edu](mailto:afdet535@syr.edu), [Airforce ROTC website](#).

Army contact information: Phone number 1-800-295-3705 or 315-443-2462, email [armyrotc@syr.edu](mailto:armyrotc@syr.edu), [Army ROTC website](#).

## Frequently Asked Questions

### **I have AP credit in Calculus. Do I still need to take the Mathematics Placement Exam?**

Yes. All newly admitted College of Engineering and Computer Science students are required to take the Mathematics Placement Exam to assure placement in the proper mathematics/calculus course.

### **Do I still need to meet with an advisor during Orientation Weekend even though I will be pre-registered?**

No. Although the E&CS office will make every effort to register you for the appropriate courses, during Orientation Weekend you may attend your advising session to go over your fall schedule and make necessary adjustments.

### **When will I be assigned an advisor?**

Advisor assignments are made by the College in mid-August. You will receive notification of your advisor assignment during Orientation Weekend.

### **Should I register for Academic Excellence Workshop - ECS?**

Yes. It is highly recommended for first-year students to enroll in ECS because it is designed to supplement the theory taught in calculus courses and helps you master the subject.

### **When can I get my email/computer account?**

You will receive in the mail instructions to set up your Syracuse University [NetID](#).

### **When can I purchase my textbooks?**

During the summer, the SU Bookstore will send you information about purchasing books according to your schedule. The books will be packed and ready for pick up during Orientation Weekend. Alternately, you may opt to purchase your textbooks when you arrive on campus. The SU Bookstore has extended hours at the start of each semester to accommodate your shopping needs.

### **Should I bring or buy my own computer?**

Bringing your own personal computer is a personal choice. Many students find **it convenient to own a personal** computer. If you do not wish to purchase or bring your own computer, there are many computer labs located throughout campus and residence halls for your use. If you wish to purchase your own computer [here are suggestions](#).

The University Bookstore offers University-recommended computers, computer software, and many accessories. Syracuse University students, faculty and staff can receive significant savings on educationally priced software. For more information on computing services, go to [Information Technology & Services website](#).