

Engineering Science

Associate in Science Transfer Program

Program Supervised by:

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The Engineering Science Program is designed to prepare the student to transfer to any of the major universities as a full junior in the engineering major of his/her choice. The program is calculus based and is modeled on the first two years of engineering majors in schools such as Binghamton University, SUNY at Buffalo, Clarkson University, Rensselaer Polytechnic Institute, Rochester Institute of Technology, Syracuse University, Wilkes College, and Cornell University. Students who successfully complete the program have no trouble transferring to the listed schools as well as most unlisted universities. Students can take electives needed to transfer as Electrical, Mechanical, Computing, Civil, Industrial and Systems Engineering majors as well as Engineering Management and a number of others.

To be admitted to this, or any other engineering program, the student needs to be properly prepared by taking courses in Physics, Chemistry and Mathematics, as listed under "Academic Preparation for Admissions" (see page 12.)

SEQUENCE OF COURSES: The following model meets all program requirements for students who are pursuing full-time study and wish to complete the course work in four semesters. Those who desire a slower pace or need preparatory courses will require more than four semesters.

FIRST YEAR		Credits
Fall Semester		
EGR 150	Engineering Design I and Graphics	2
CHM 145	Chemistry I	4
MAT 181	Calculus I	4
CST 127	Introduction to C++ (EGR elective I)	3
ENG 110/111	College Writing I/II	3
EGR 100	Engineering Orientation: Student Success I	0.5
		16.5
Spring Semester		
EGR 151	Engineering Design II	2
	Engineering Elective II	3/4
MAT 182	Calculus II	4
PHY 181	Engineering Physics I	4
	Social Sciences Electives	3
EGR 101	Engineering Orientation: Student Success II	0.5
		16.5/17.5

SECOND YEAR

Fall Semester

EGR 289W	Digital Logic and Microprocessors	3
EGR 287	Engineering Design III	1
PHY 182W	Engineering Physics II	4
	Engineering Elective or Social Science elective	3
MAT 282	Differential Equations and Linear Algebra	4
PED 155 or PED Electives	2
EGR 200	Engineering Orientation: Student Success III	0.5
		17.5

Spring Semester

EGR 288	Engineering Design IV	1
	Engineering Elective III or Social Science Writing Emphasis Elective	3
	Engineering Elective IV	3
	Engineering Elective V	3
MAT 281 or Approved Mathematical Elective	4
EGR 201	Engineering Orientation: Student Success IV	0.5
ENG 111/220	3
		17.5

GRADUATION REQUIREMENTS: 68 CREDITS

Computer and Calculator Recommendations:

Students will have to use a computer to analyze problems, make presentations, and write reports. While the College provides access to computers, most students need to have their own computer since they are so often used. Students are strongly urged to purchase a modern Windows-based computer. Internet access is very useful. Students will also need a high level graphing calculator. (The T-89 is currently recommended.)

Engineering Majors: Students choose technical electives appropriate to their individual career path. Chemical Engineering majors take two semesters of Organic Chemistry. Biological or Environmental engineers usually take two semesters of Biology. Computer Engineers usually need three semesters of programming classes. Civil and Mechanical engineering fields usually require Statics, Dynamics and Strength of Materials. Circuits are taken by most students. Engineering Management options will require other substitutions. Students are urged to review requirements of their desired university transfer program.