

PRE-ENGINEERING PROGRAM

This program establishes a freshman and sophomore curriculum leading to transfer admission by Articulation Agreement (2+3) to a Bachelor of Science degree program in one of the engineering disciplines at the:

- University of Massachusetts-Lowell in Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Mechanical Engineering, Plastics Engineering, and Engineering Technology;
- University of Massachusetts-Dartmouth: Bio-Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Mechanical Engineering;
- Mass Maritime Academy: Energy Engineering, Facilities Engineering.

Each student who enters the program will be assigned an advisor from the Department of Physics and Earth Sciences. By the end of their freshman year, students should be considering what specific area of engineering they wish to transfer into at the above-mentioned institutions. It may be necessary for transfer students to schedule summer session coursework if they wish to complete all degree requirements over a four-year period.

The program of study during the two years at Framingham State University is shown below. Each incoming student must pass the mathematics placement examination in order to register for a credit-bearing mathematics course. Students must do well on this examination to begin the mathematics sequence with Calculus I. Students who do not place into the Calculus I course are required to take additional mathematics prior to taking Calculus I. Courses to be taken during the sophomore year of the program depend, to some extent, on the choice of engineering concentration.

First-Year: (common to all engineering options)

Fall Semester

CHEM 107/107L	Principles of Chemistry with Lab	_____
EGNR 101	Introduction to Engineering	_____
ENWR 110	Composition II	_____
MATH 219	Calculus I	_____

Spring Semester

CHEM 108/108L	Principles of Chemistry and Quantitative Analysis	_____
CSCI 130	Computer Science I Using Java	_____
ECON 102	Principles of Microeconomics	_____
MATH 220	Calculus II	_____

Second-Year:

Fall Semester

MATH 221	Calculus III	_____
PHYS 211/211L	Principles of Physics I with Lab	_____
ENGL ____	A Literature course	_____
_____	Elective*	_____

Spring Semester

CSCI 215	Computer Science II Using Java	_____
EGNR 201	Engineering Mechanics	_____
PHYS 212/212L	Principles of Physics II with Lab	_____
_____	Elective*	_____

***Electives (suggested):**

BIOL 160/160L	Introduction to Organismal Biology with Lab	
BIOL 161/161L	Introduction to Cell and Molecular Biology with Lab	
CHEM 207/207L	Organic Chemistry I with Lab	
CHEM 208/208L	Organic Chemistry II with Lab	
ECON 101	Principles of Macroeconomics	
MATH 222	Differential Equations	