

# Chemical Engineering

## *Elective Focus Area*

# Energy & Environment

### General Education Components (15 semester hours)

Take 15 s.h. of courses consistent with career goals

*consider the following courses:*

52:030 Energy and Society (3 s.h.)

06E:133 Environmental Economics (3 s.h.; pre-reqs: 06E:001 and 06E:002 or only one of these courses with instructor consent)

044:125 Environmental Impact Analysis (3 s.h.)

### Statistics Elective (3 semester hours)

*(Recommended: 22S:039)*

22S:039 Probability and Statistics for Engineering and Physical Sciences 3 s.h.

### Engineering Elective (3 semester hours)

052:237 Green Chemical and Energy Technologies (formerly Green Chemical Engineering) 3 s.h.

### Advanced Chemistry Electives (9 or 10 semester hours)

*(Choose the Analytical, Physical, or Biochemical sequence)*

Advanced Chemistry Course 3 s.h.

Advanced Chemistry Course 3 s.h.

Advanced Chemistry Lab 3 or 4 s.h.

### Free Electives (12 or 11 semester hours from the following list)

Choose at least 3 s.h. from the [Engineering](#) course list and 3 s.h. from the [Science](#) course list.

#### Engineering Electives

052:108	Introduction to Biochemical Engineering	3 s.h.
052:231	Environmental Chemistry I	3 s.h.
052:235	Air Pollution Control Technology	3 s.h.
052:236	Atmospheric Chemistry and Physics	3 s.h.
053:107	Sustainable Systems	3 s.h.
053:154	Environmental Microbiology	3 s.h.
058:048	Energy Systems Design	4 s.h.
058:148	Combustion and Propulsion	3 s.h.
058:147	Fuel Cells	3 s.h.
(100-level or higher)	Other Advanced Engineering courses – consult with academic advisor	

#### Science Electives

002:010	Principles of Biology I	4 s.h.
002:011	Principles of Biology II	4 s.h.
004:173	Atmospheric and Environmental Chemistry	3 s.h.
012:114	Energy and the Environment	3 s.h.
012:158	Biogeochemical Cycles and Modeling	3 s.h.
044:101	Climatology	3 s.h.
044:105	Introduction to Environmental Remote Sensing	3 s.h.
044:110	GIS for Environmental Studies	3 s.h.
175:197	Environmental Health	3 s.h.
175:221	Aerosol Technology	3 s.h.
175:230	Occupational Health	3 s.h.
(100-level or higher)	see Advanced Geosciences, Occupational & Environmental Health, Chemistry, and Geography courses	