COLLEGE OF ENGINEERING
Undergraduate Programs and Credits

Degree Program	Website Description	Catalog Description	Total Credits	Credits in Major	Mission or objectives?
Biomedical Engineering	Biomedical engineering is an interdisciplinary area in which engineering techniques are applied to problem solving in the life sciences and medicine. Biomedical engineers design medical ...	Biomedical Engineering is an interdisciplinary area in which engineering techniques are applied to problem solving in the life sciences and medicine. Biomedical engineers design medical ...	133-135	94-96	Objectives listed in catalog
Chemical Engineering	Chemical Engineering involves applying fundamental principles of chemistry, physics, and biology to the engineering of processes — the transformation of a "thing" to some other "thing" -- and products -- the things themselves.	The chemical engineer is concerned with the application and control of processes leading to changes in chemical composition... frequently associated with the production of useful products…	131-139	95-103	Mission and objectives listed in catalog
Civil Engineering	No description of the discipline is given on the website	Civil engineers are responsible for researching, developing, planning, designing, constructing, and managing many of the complex systems and facilities essential to modern civilization.	129	90	Mission and objectives listed in catalog
Computer Engineering	Traditionally, computer engineering ...combines both electrical engineering and computer science... such as advanced computer system architecture, design and programming, computer communication, etc.	Traditionally, computer engineering ...combines both electrical engineering and computer science... such as advanced computer system architecture, design and programming, computer communication, etc.	128-131	89-92	Objectives listed in catalog
Electrical Engineering	Program outcome #3 - to design a variety of electronic and/or computer-based components and systems for applications including signal processing, communications, computer networks, and control systems.	Since electrical engineering instrumentation is at the heart of modern science and technology, electrical engineers are employed on only in the computer, electronics, communications, and power industries, but also in diverse enterprises such as...	131-134	92-95	Objectives listed in catalog
Industrial Engineering	The Department has established cutting edge research in areas as design for manufacture, manufacturing systems design, rapid manufacturing, quality engineering and assembly and human factors studies in transportation.	Graduates ...practice professionally in the fields of industrial engineering for both manufacturing and service sectors...such as systems engineering, quality engineering, logistics, human factors, health care, and transportation.	129	90	Mission and objectives listed in catalog
Mechanical Engineering	No description of the discipline is given on the website	The program is strong in providing a background in design, solid and fluid mechanics, systems engineering, and the thermal sciences, including energy and energy transfer.	129-130	90-91	Objectives listed in catalog
Ocean Engineering	… such topics as ocean instrumentation and seafloor mapping, underwater acoustics and data analysis, marine hydrodynamics and water wave mechanics, coastal and nearshore modeling, marine geomechanics, coastal and offshore structures, and corrosion.	The broad-based program exposes students to... ocean instrumentation and data analysis, underwater and sub-bottom acoustics, marine hydrodynamics, coastal and near shore processes, marine geomechanics, structures, and corrosion.	130	91	Mission and objectives listed in catalog

Clarity/Order: All engineering curricula are completely specified by semester in the catalog.

All programs except Chemical Engineering have one free elective (3 credits). Chemical Engineering has no free electives.

All programs require 36 credits of general education, including 3 credits of foreign language/culture and ECN201 as one of the social science courses. Industrial engineering also requires ECN202.

Several programs require Engineering Ethics (EGR/PHL316) as one of the Letters courses.