ENGR 001. First-Year Design Experience. 0-3 Credits.
Introduction to the engineering profession and the engineering design process. Hands-on experiences that emphasize interdisciplinary teamwork, seeking and defining problems, and developing, fabricating and/or testing solutions. Data analysis and technical communications.

ENGR 002. Graphical Communication. 0 or 2 Credits.
Principles of computer-aided drafting/design; production of engineering drawings including: orthographic, auxiliary, section, pictorials and dimensioning, graphics and charts; applications in specific engineering disciplines.

ENGR 010. D1:Dvrsity Issues:Math/Sci/Egr. 3 Credits.
Diversity in CEMS: under-representation, environmental justice, gender/race participation, ethical considerations, urban planning, equal opportunity, Title IX. Landscape of race/gender in STEM.

ENGR 020. Programming for Engineers. 3 Credits.
Introduction to computer programming principles using MATLAB, with applications chosen from civil, electrical, environmental, and mechanical engineering. Co-requisite: MATH 021. Cross-listed with: CS 020. Credit not given for both CS 016 and CS 020/ENGR 020.

ENGR 050. First Year Engineering Seminar. 0 or 1 Credits.
This required seminar for first year engineering students exposes them to curricular options career paths. The course will also introduce basic principles of engineering design through project based laboratories. Students will interact with faculty, professionals and peers in their fields.

ENGR 090. Internship. 1-3 Credits.
An on-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

ENGR 095. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

ENGR 101. Engineering Communications. 3 Credits.
Traditional technical and scientific writing forms, including outlines, summaries, abstracts, technical descriptions, research reports/papers and proposals; written and oral technical communication with technical and nontechnical audience; electronic professional portfolio. Prerequisites: ENGS 001; Engineering major.

ENGR 190. Internship. 1-18 Credits.
An on-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

ENGR 192. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

ENGR 195. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

ENGR 197. Teaching Assistantship. 1-3 Credits.
Undergraduate student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

ENGR 198. Undergraduate Research. 1-18 Credits.
Undergraduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

ENGR 201. Ethics in CEMS Rsrch/Practice. 1 Credit.
Professional responsibilities of computer scientists, engineers, mathematicians and statisticians in research and practice. Professional rights and responsibilities, research integrity, fair credit in research and publication. Prerequisite: Senior/Graduate standing.

ENGR 290. Internship. 1-18 Credits.
An on-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

ENGR 292. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

ENGR 295. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

ENGR 296. Special Topics. 1-18 Credits.
See Schedule of Courses for specific titles.

ENGR 297. Teaching Assistantship. 1-3 Credits.
Undergraduate student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

ENGR 298. Undergraduate Research. 1-18 Credits.
Undergraduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.