

CIVIL ENGINEERING – GEN ED Curriculum

GENERAL EDUCATION PROGRAM

Requirements	Credits
Fundamental Studies Types: GENED (4 courses)	
Academic Writing (FSAW) ENGL 101 _____	3
Professional Writing (FSPW) ENGL 393 ENGL101 & >60 credits	3
Oral Communications (FSOC) _____	3
Distributive Studies:	
History and Social Sciences (DSHS) _____	3
History and Social Sciences (DSHS) _____	3
Humanities (DSHU) _____	3
Humanities (DSHU) _____	3
Scholarship in Practice (DSSP) _____	3
(DSSP must be out of major)	
I-Series (SCIS) (2 courses)	
I-Series _____	3
I-Series _____	3
Diversity (4-6 credits / 2 classes)	
Understanding Plural Societies (DVUP) _____	3
Plural Societies or Cultural Competence (DVCC/DVUP) _____	1-3

MAJOR REQUIREMENTS

Basic Sciences	
CHEM 135 - Chem for Eng co-requisite MATH 140 _____	3
PHYS 161 - General Physics I co-requisite MATH14 _____	3
PHYS 260 - Gen Physics II MATH 141, PHYS 161 _____	3
PHYS 261 - Gen Physics II Lab PHYS 260 _____	1
MATH 140 - Calculus I _____	4
MATH 141 - Calculus II MATH140 _____	4
MATH 241 - Calculus III MATH 141 _____	4
MATH 246 - Differential Equations MATH 241 & one of MATH240 or ENES102 or PHYS161 or PHYS171 _____	3
Science Elective: choose one from: _____	4/3
BSCI160 Principles of Ecology	
ENSP101 Environmental Science	
GEOL100 Physical Geology	

Engineering Sciences

ENES100- Intro to Eng Design co-requisite MATH 140 _____	3
ENES102- Mechanics I co-requisite MATH 140 _____	3
ENES220-Mechanics II ENES102, MATH141, PHYS161 _____	3

Major Requirements

ENCE100 - Intro to Civil Eng _____	1
ENCE200-CE Computation MATH141, ENES100, ENES102 _____	3
ENCE201-EngInfoProcessing MATH141, ENES220 co-requisite MATH246 _____	3
ENCE215 -Eng for Sustainability CHEM 135 _____	3
ENCE300 - Fund of Eng Materials ENES 220 _____	3
ENCE302-Probability&Statfor CEE MATH246, ENCE201 _____	3
ENCE305 - Fund of Eng Fluids ENES220 _____	3
ENCE360-Analysis of CE Systems MATH 140, ENCE201 _____	3
45cr benchmark; Prerequisites in red; Eligible Courses in blue	

NOTES.

- Prepare and submit your own Plan of Study during Advising
Example available at: <http://www.eng.umd.edu/advising/four-year-plan>
- Check course scheduling for all remaining semesters in both TESTUDO, and: <http://www.cee.umd.edu/content/schedule-classes>
- Courses offered ONLY in Fall: ENCE 432, 441, 454, 470
- Courses offered ONLY in Spring: ENCE 402, 412, 421, 431, 472

TRACK REQUIREMENTS

Requirements	Credits
Environmental/ Water Resources Track*	
ENCE 205-Biology for Civil Engineers MATH140 _____	3
ENCE 310 - Intro to Environ Eng PHYS 260, ENCE215 _____	3
ENCE 411 - Environ Eng Science ENCE310 _____	3
ENCE 412-EnvironUnitOperation ENCE305, ENCE 310 _____	3
ENCE 422 - ProjCostAccounting&Econ _____	3
ENCE 431 - Hydrologic Eng ENCE305 _____	3
ENCE 432 - Ground Water Hydrology ENCE305 _____	3
ENCE 466 - Design of Civil Eng Systems _____	3
ENCE Breadth Electives (2 courses from the same group) _____	6
Two from: ENCE 340, 353, 441, 444, 454	
OR	
Two from: ENCE 320/325**, 370, 402, 423, 470, 472	
Technical Electives (2 courses) *** _____	6

Geotechnical & Structural Engineering Track*

ENES 221- Dynamics ENES 102, MATH 141, PHYS161 _____	3
ENCE 320 OR ENCE 325** - Eng Project Management _____	3
ENCE 340 - Fund of Geotechnical Eng ENES220 _____	3
ENCE 353-IntroStructural Analysis ENES220, MATH246 _____	3
ENCE 441 - Foundation Design ENCE340 _____	3
ENCE 444-ExpMethGeotech&Struct ENCE340, 353 _____	3
ENCE 454 - Design Concrete Structures ENCE353 _____	3
ENCE 466 - Design of Civil Eng Systems _____	3
ENCE Breadth Electives (2 courses from the same group) _____	6
Two from: ENCE 370, 402, 422, 423, 470, 472	
OR	
Two from: ENCE 310, 411, 412, 431, 432	
Technical Electives (2 courses) *** _____	6

Transportation / Project Management Track*

ENCE 320 OR 325** - Eng Project Management _____	3
ENCE 370-IntroTransportation ENCE201, PHYS 260/261 _____	3
ENCE 402-Simulation&Design of Experiments ENCE302 _____	3
ENCE 422 - ProjCostAccounting&Econ _____	3
ENCE 423 - ProjPlanning, Scheduling&Co _____	3
ENCE 466 - Design of Civil Eng Systems _____	3
ENCE 470 - Highway Engineering ENCE302, ENCE370 _____	3
ENCE 472 - Transportation Eng ENCE302, ENCE 370 _____	3
ENCE Breadth Electives (2 courses from the same group) _____	6
Two from: ENCE 340, 353, 441, 444, 454	
OR	
Two from: ENCE 310, 411, 412, 431, 432	
Technical Electives (2 courses) *** _____	6

- * In each TRACK no more than 3 total ENCE with the same first 2 digits (example ENCE42x).
With any minor a MAX of two courses may double count.
- ** ENCE320/325 ONLY ONE will count in BS degree (major & minor).
- *** Electives 3XX, 4XX, or 6XX with Advisor Approval.
 - At least (1) one from civil (ENCE).
 - Usable non-ENCE elective need advisor approval and should have:
 - i) science oriented technical content, and,
 - ii) math/science prerequisites.
 - NO more of one ENCE 489 (except ENCE 489x courses with a letter designation).

NOTES. All engineering (ENXX) and technical (i.e., MATH, PHYS, CHEM) courses must be completed with a grade of C- or better; All degree courses must be taken for a regular grade. A minimum of 120 credits and completion of all degree requirements is required for graduation. The responsibility for meeting all graduation requirements in any curriculum rests with the student. Consult the Uachieve for further grade and GPA requirements related to GEN ED and civil major courses. <https://uachieve.umd.edu/>