

CIVIL ENGINEERING (Course List and Requirements)

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CORE GENERAL EDUCATION PROGRAM

Requirement _____ *Course/Grade/Credit*

[See Chapter 5 UG Catalog "Core Program Requirements"](#)

Fundamental Studies (6 credits)

English Composition - ENGL 101	3
Advanced Composition - ENGL 393	3

Distributive Studies (18 credits) [Lower level courses]

Humanities and the Arts (9 credits)

Literature (HL)	3
Arts (HA)	3
Other Humanities (HA, HL, HO, IE*)	3

Social and Behavioral Sciences (9 credits)

Social/Political History (SH)	3
Behavior/Social Science (SB)	3
Behavior/Social Science (SB, IE*)	3

*Only one Interdisciplinary & Emerging Issues (IE) course can be taken in place of third humanities or behavior/social science course.

Advanced Studies (6 credits) [Upper level courses]

Must be courses outside of your major department or may include an approved Capstone course in your major

	3
ENCE 466 - Design of Civil Eng Systems*	0

*CORE Approved Capstone Course.

Diversity (3 credits)

One course from approved list (D)	0/3
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MAJOR REQUIREMENTS

[See Chapter 7 UG Catalog "Civil & Environmental Engineering" & CEE Curriculum in http://www.cee.umd.edu/undergrad/index.php](#)

Basic Sciences

CHEM 135 - Chem for Eng	3
PHYS 161 - General Physics I	3
PHYS 260 & 261 - Gen Physics II w Lab	3/1
MATH 140 - Calculus I	4
MATH 141 - Calculus II	4
MATH 241 - Calculus III	4
MATH 246 - Differential Equations	3

Engineering Sciences

ENES 100 - Intro to Eng Design	3
ENES 102 - Statics	3
ENES 220 - Mechanics of Materials	3
ENES 221 - Dynamics**	3

** Required for Infrastructure Track Only.

Major Requirements

ENCE 100 - Intro to Civil Eng	1
ENCE 200 - Eng Info Processing I	3
ENCE 201 - Eng Info Processing II	3
ENCE 215 - Applied Eng Sciences	3
ENCE 300 - Fund of Eng Materials	3
ENCE 301 - Geo-Metrics & GIS in Civil Eng	3
ENCE 302 - Probability & Stat for CEE	3
ENCE 305 - Fund of Eng Fluids	3

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Environmental & Water Resources Track

BSCI 105 - Princ of Biology I	4
ENCE 310 - Intro to Environ Eng	3
ENCE 402 - Simulation & Design of Experiments	3
ENCE 411 - Environ Eng Science	3
ENCE 412 - Environ Eng Unit Operation	3
ENCE 422 - Proj Cost Accounting & Economics	3
ENCE 431 - Hydrologic Eng	3
ENCE 432 - Ground Water Hydrology	3
ENCE 466 - Design of Civil Eng Systems	3
ENCE Elective (INF)	3
ENCE Elective (T/PM)	3
ENCE Elective	3
ENCE Elective	3

OR

Infrastructure Engineering Track

ENCE 320 - Eng Project Management	3
ENCE 340 - Fund of Geotechnical Eng	3
ENCE 353 - Intro to Structural Analysis	3
ENCE 441 - Foundation Design	3
ENCE 444 - Geotechnical Lab	3
ENCE 453 - Structures Comp Methods	3
ENCE 454 - Design Concrete Structures	3
ENCE 466 - Design of Civil Eng Systems	3
ENCE Elective (E/WR)	3
ENCE Elective (T/PM)	3
ENCE Elective	3
ENCE Elective	3

OR

Transportation & Project Management Track

ENCE 320 - Eng Project Management	3
ENCE 360 - Analysis of Civil Eng Systems	3
ENCE 370 - Intro to Transportation Eng & Planning	3
ENCE 402 - Simulation & Design of Experiments	3
ENCE 422 - Proj Cost Accounting & Economics	3
ENCE 423 - Proj Planning, Scheduling & Control	3
ENCE 466 - Design of Civil Eng Systems	3
ENCE 470 - Highway Engineering	3
ENCE 472 - Transportation Eng	3
ENCE Elective (E/WR)	3
ENCE Elective (INF)	3
ENCE Elective	3
ENCE Elective	3

- E/WR=Environmental & Water Resources
- INF=Infrastructure
- T/PM=Transportation & Project Management

NOTES

Effective Spring 05+ postsecondary matriculation:
 All engineering (ENXX) and technical (i.e., MATH, PHYS, CHEM) courses must be completed with a grade of "2.0" or better.
 Other:
 - All engineering (ENXX) courses must be completed with a grade of "2.0" or better.
 - All degree courses must be taken for a regular grade. A minimum of 122 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 Degree Navigator at <http://www.testudo.umd.edu/dnentry.html>