

# RECOMMENDED ACADEMIC PLAN – CIVIL ENGINEERING

This outline shows the requirements for the Penn State Harrisburg's Civil Engineering degree including the concentration areas of Structural, Construction, Environmental, and General. Students must see their academic adviser to carefully plan their program of study.

## General Concentration

Semester I	Semester II
ENGL 015 or 030- English Composition (GWS) 3	Gen Education- Humanities (GH) 3
EDSGN 100 Introduction to Engineering Design 3	ECON 002, 004 or 014 Introductory Microeconomic Analysis and Policy (GS) 3
•CHEM 110 Chemical Principles I (GN) 3	CAS 100 Effective Speech (GWS) 3
CHEM 111 Experimental Chemistry I (GN) 1	•MATH 141 Calculus with Analytic Geometry II (GQ) 4
•MATH 140 Calculus With Analytic Geometry I (GQ) 4	•PHYS 211 General Physics: Mechanics (GN) 4
CAP 160S First Year Seminar 1	
	17
Semester III	Semester IV
Gen Education- Behavioral Science (GS) 3	General Education- Art (GA) 3
GEOSC 001 Physical Geology 3	CMPS 121 Introduction to Programming Techniques, 201 Programming for Engineers with C++ or 202 Programming for Engineers with FORTRAN (GQ) 3
+E MCH 211 Statics 3	+E MCH 212 Dynamics 3
PHYS 212 General Physics: Electricity and Magnetism (GN) 4	+E MCH 213 Strength of Materials 3
MATH 251 Ordinary and Partial Differential Equations 4	MATH 220 Matrices (GQ) 2
	I E 424 Process Quality Engineering or GEOEE 406 Sampling and Monitoring of the Geo-Environment or STAT 401 Experimental Methods or MATH 444 Mathematical Statistics and Applications I 3
	17
Semester V	Semester VI
+C E 310 Surveying 3	Health & Physical Activity (GHA) 1.5
+C E 336 Materials Science for Civil Engineers 3	+C E 332 Professionalism, Economics & Construction Project Delivery 3
+C E 337 Civil Engineering Materials Laboratory 1	+ # C E 341 Design of Concrete Structures or C E 342 Design of Steel Structures 3
+C E 340 Structural Analysis 3	+C E 360 Fluid Mechanics 3
ENGL 202C Effective Writing: Technical Writing (GWS) 3	+C E 370 Introduction to Environmental Engineering 3
M E 201 Introduction to Thermal Science or M E 302 Engineering Thermodynamics 3	+ # C E 335 Engineering Mechanics of Soils or C E 436 Construction Engineering Materials 3
	16.5
Semester VII	Semester VIII
Health & Physical Activity (GHA) 1.5	General Education -Humanities (GH) 3
General Education- Art (GA) (IL) 3	C E 321 Highway Engineering 3
C E 432 Construction Project Management 3	C E 438W Construction Engineering Capstone Design 3
+ # C E 435 Foundation Engineering or ##Concentration Elective (Select ONE from the Structural Concentration List) 3	E E 210 Circuits and Devices or E E 211 Electrical Circuits and Power Distribution or E E 212 Introduction to Electronic Measuring Systems 3
+ENVE 417 Hydraulic Design 3	##Concentration Elective (Select ONE from the Environmental Concentration List) 3
##Concentration Elective (Select ONE from the Construction Concentration List) 3	
16.5	15

### Advising Notes

- **Bold type** require a grade of C or better.
- *Italics* indicates courses that satisfy both major and General Education requirements.
- **Bold Italics** indicates courses requiring a quality grade of C or better and that satisfy both major and General Education requirements.
- GWS, GHA, GQ, GN, GA, GH, and GS are codes used to identify General Education requirements.
- US, IL, and US;IL are codes used to designate courses that satisfy University United States/International Cultures requirements.
- W is the code used to designate courses that satisfy University Writing Across the Curriculum requirements.

The C E baccalaureate degree requires a minimum of 130 total credits, a concentration area (Structural, Construction, Environmental, or General), and a minimum of 52 credits taken at Penn State Harrisburg.

- Required a C or better for entrance to major.

+ Required a C or better for Graduation in this major.

## Concentration elective courses must be selected from the concentration lists. Plan of study may include course prerequisites.

**Students must complete a 3-credit course in "United States Cultures (US)" and a 3-credit course in "International Cultures (IL)."**

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