

# Civil Engineering

## Bachelor of Science

Effective: Fall 2023

<https://www.ccsu.edu/programs/civil-engineering-bs/curriculum-civil-engineering-bs>

Department of Engineering

Central Connecticut State University

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### General Education Study Areas (26 credits):

I. Arts and Humanities <sup>1</sup>		Crs
Literature (200 level or higher)		3
PHIL or Fine Arts		3
Literature or PHIL or Fine Arts		3

### II. Social Sciences<sup>2</sup>

History		3
ECON or ET 399 - Engineering Economy <sup>(Preferred)</sup>		3

### III. Behavioral Sciences

Anthropology or Psychology or Sociology		3
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### IV. Natural Sciences

PHYS 125 - Univ Physics I		4
PHYS 126 - Univ Physics II		4

### General Education Skill Areas (16 to 23 credits):

I. Communication Skills		Crs
WRT 110 - Intro. to College Writing		3
ENGR 290 - Engr Tech Writing & Presentation		3

### II. Mathematics

MATH 152 - Calculus I		4
MATH 221 - Calculus II		4

### III. Foreign Language Proficiency<sup>3</sup>

		0 - 6
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### IV. University Requirement

PE 144 - College Wellness <sup>4</sup>		2 or 3
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### International Requirement (6 credits)<sup>5</sup>

### Equity, Justice, and Inclusion Requirement (3 credits)<sup>6</sup>

### Major Requirements (64 credits):

		Crs	Sem.	
			F	S
ENGR 150	Introduction to Engineering	3	X	X
ENGR 240	Spreadsheet & Prob. Solv. Tools w/Lab	3	X	X
ENGR 251	Engr. Mech. I - Statics	3	X	X
ENGR 252	Engr. Mech. II - Dynamics	3	X	X
ENGR 357	Mechanics of Materials	3	X	X
CE 222	CAD Applications in CE w/Lab	2	X	X
CE 253	Intro. to Engr. Surveying w/Lab	3	X	
CE 354	Fluid Mechanics for CE	3	X	X
CE 356	Civil Engr. Materials w/Lab	3	X	X
CE 360	Traffic Engineering w/Lab	3	X	
CE 375	Hydraulic Engineering	3	X	X
CE 376	Environmental Engineering	3	X	
CE 397	Structural Analysis I	3	X	X
CE 407	Structural Analysis II	3		X
CE 451	Soil Mechanics w/Lab.	3		X
CE 452	Foundation Engineering	3	X	
CE 460	Highway Design and Construction	3		X
CE 470	Structural Steel Design	3	X	
CE 471	Reinforced Concrete Structures	3		X
CE 475	Hydrology and Storm Drainage w/Lab	3	X	
CE 497	Prof. Practice & Sr. Project Research	2	X	
CE 498	Senior Design Project (Capstone)	3		X

### Additional Requirements (22 credits):

		Crs	F	S
CHEM 161	General Chemistry	3	X	X
CHEM 162	General Chemistry Lab.	1	X	X
MATH 226	Linear Algebra and Prob. for Engr.	4	X	X
MATH 355	Intro. to Differential Equations w/ Applications	4	X	X
BIO/GSCI/BMS	Additional Science Elective w/Lab <sup>7</sup>	4	X	X
	CE Directed Technical Elective <sup>8</sup>	3	X	
	CE Directed Technical Elective <sup>8</sup>	3		X

**TOTAL CREDITS = 128**

Minimum grade of C- is required in all courses in the major, all additional requirements, and courses in Study Area IV, Skill Area I, and Skill Area II.

<sup>1</sup> For Study Area I, no more than 6 credits in any one subject area are allowed. 3 of the credits must be in a literature course (200 level or higher).

<sup>2</sup> For Study Area II, at least 3 credits must be in history.

<sup>3</sup> Refer to the "Skill Area III. Foreign Language Proficiency" in the University Catalog.

<sup>4</sup> Transfers entering with 15 or more credits may complete this requirement with 2 or 3 additional credits from ENGR 150 or other courses listed under "Skill Area IV. University Requirement" in the University Catalog.

<sup>5</sup> General Education courses with designator [I] in the course description fulfill the International requirement.

<sup>6</sup> CE 460 is an EJI designated course; transfer students with 50 or more credits can waive the EJI requirement.

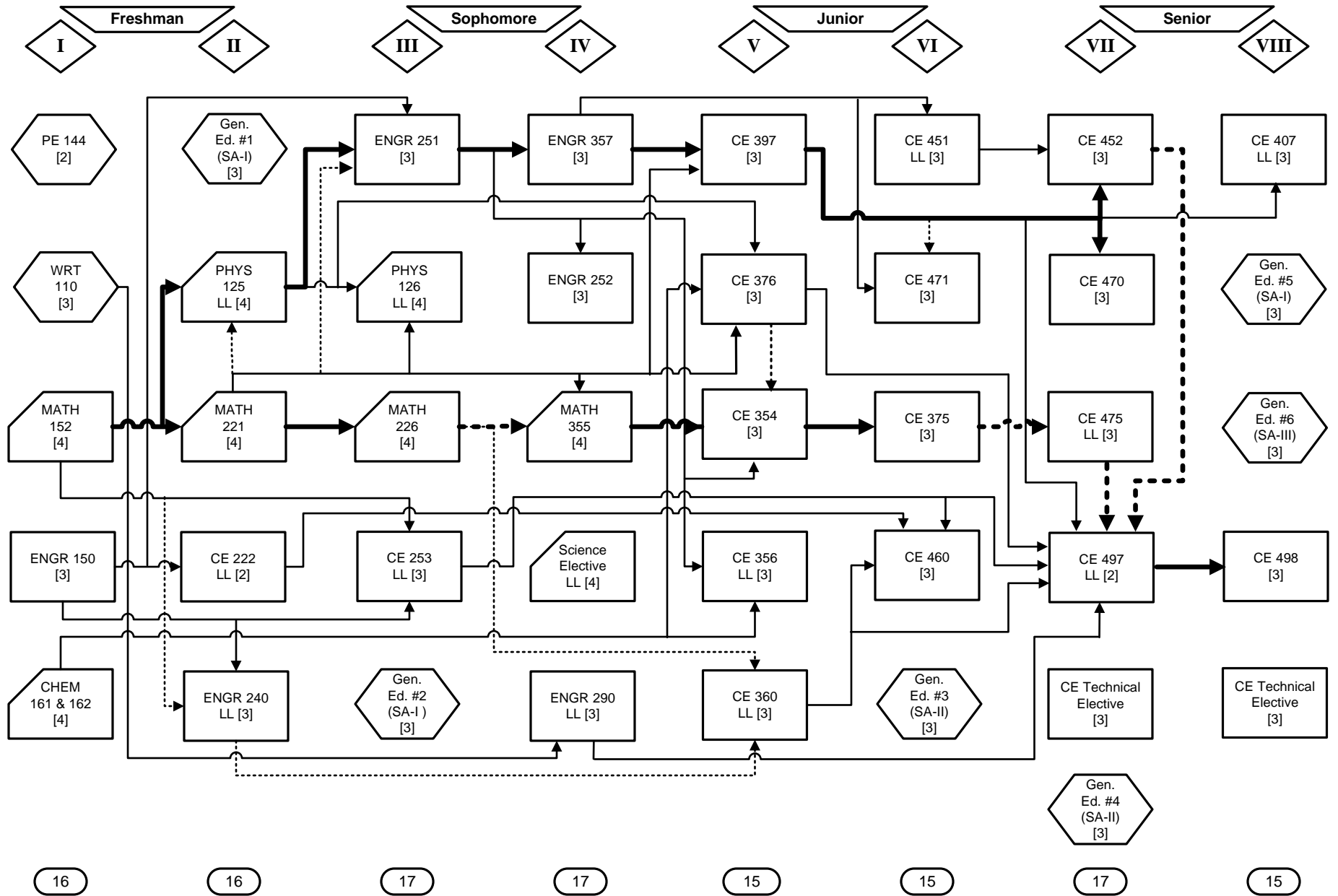
<sup>7</sup> BIO 121, or BMS 102 & 103, or GSCI 121 & 125; the Additional Science Elective must include a laboratory.

<sup>8</sup> Recommended CE Dir. Tech. Electives: CE 357(3), CE 402(1), CE 458(3), CE 472(3), CE 473(3), CE 474(3), CE 477(3), CE 490(2), CE 491(1), and CE 495(3); the CE Dir. Tech. Electives must be 6 or more credits.

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# CCSU – Dept. of Engineering – Civil Engineering Program Flowchart

Effective: Fall 2023



- > May be taken concurrently
- > C- or higher
- > Critical path