

Civil Engineering Curriculum  
Fall 2019 – Spring 2020

<b>Math 20100</b> Calculus I Pre: Math 19500 (C min.)  4 cr.	<b>Chem 10301</b> General Chemistry I Pre: Math 19500 (C min.)  4 cr.	<b>Engl 11000<sup>6</sup></b> Freshman Composition  3 cr.	<b>Engr 10100<sup>6</sup></b> Engineering Design Pre/Co: Math 19500 (min.C)  1 cr.	<b>CSc 10200</b> Introduction to Computing Pre: Math 19500 (C min.) or Pre/Co: Math 20100 (C min.)  3 cr.	<b>Liberal Arts<sup>4</sup></b>   3 cr.
<b>Math 21200</b> Calculus II Pre: Math 20100 (C min.) 4 cr.	<b>Chem 10401</b> General Chemistry II Pre: Chem 10301, (C min.) 4 cr.	<b>Phys 20700</b> General Physics I Pre/Co: Math 21200 4 cr.	<b>CE 20900</b> Structural and Site Plans Pre/Co: CSc 10200 3 cr.	<b>Engr 21007</b> Writing for Engineering Pre: Eng 11000 or FIQWS 3 cr.	<b>Science Elective</b>  <b>EAS 32800</b> Global Environ. Haz  Or <b>Bio 10100</b> Bio Foundatns.  3 - 4 cr.
<b>Math 21300</b> Calculus III Pre: Math 21200 (C min.) 4 cr.	<b>CE 23100</b> Statics Pre: Phys 20700 (C min.), <b>Math 21200</b> (C min.) & CSc 10200; Co: <b>Math 21300</b> 3 cr.	<b>Phys 20800</b> General Physics II Pre: Phys 20700 Pre/Co: Math 21300 4 cr.	<b>CE 26400</b> CE Data Analysis Pre: CSc 10200 Pre/Co: <b>Math 21300</b> , Engr 21007 3 cr.		
<b>Math 39100</b> Differential Equations Pre: Math 21300 3 cr.	<b>Math 34600</b> Linear Algebra Pre: <b>Math 21300</b> or <b>Math 39200</b> Linear Algebra/Vector Ana Pre: Math 21300 3 cr.	<b>CE 35000</b> Fluid Mechanics Pre: CE 23100 (C min.), CSc 10200 Pre/Co: Math 39100 (C min.) 3 cr.	<b>CE 33200</b> Mechanics Deformable Bodies Pre: CE 23100 (C min.) Pre/Co: Math 39100 (C min.) & CE 26400 4 cr.	<b>Engineering Science Elective</b>  <b>Engr 23000</b> Thermodynamics Pre: Chem 10301 (C min.), Pre/Co: Phys 20800 (C min.) & Math 21300 (C min.) 3 cr.	
<b>CE 34000</b> Structural Analysis Pre: CE 33200, CE 20900 Co: CE 31500 & <b>Math 34600</b> (or <b>Math 39200</b> ) 3 cr.	<b>CE 36500</b> Hydraulic Engr. Pre for CE majors: CE 35000 (C min.), Pre for ESE majors: CE 35000 or ME 35600 or ChE 34100. 3 cr.	<b>CE 31500</b> Computational Methods in CE Pre: Math 39100 (C min.), CE 26400 & <b>CE 23100</b> , CSc 10200 Co: <b>Math 34600</b> (or <b>Math 39200</b> ) 3 cr.	<b>CE 32600</b> Transportation Planning Pre: CE 26400 Pre/Co: <b>CE 31500</b> 3 cr.	<b>CE 37200</b> Environmental Impact Assessment Pre for CE majors: CE 26400, Chem 10401 (C min.), & CE 35000 (C min.). Pre for ESE majors: CE 26400, Chem 10401 (C min.), & [CE 35000 or ME 35600 or ChE 34100] 3 cr.	<b>Liberal Arts<sup>4</sup></b>  3 cr.
<b>CE 34500</b> Soil Mechanics Pre: CE 35000 (C min.), CE 26400 & CE 33200 3 cr.	<b>CE 44100</b> Reinforced Concrete Pre: CE 26400 & CE 34000 3 cr.	<b>CE 32700</b> Transportation Systems Engr. Pre: CE 26400, CE 33200, CE 20900 3 cr.	<b>CE 47400</b> Environment Engineering Pre: CE 36500 & CE 37200 3 cr.	<b>Liberal Arts<sup>4</sup></b>  3 cr.	<b>Liberal Arts<sup>4</sup></b>  3 cr.
<b>Specialization Core (select one of the four areas)</b>			<b>CE 31600</b> CE Decision & Systems Analysis Pre: CE 26400, <b>CE 31500</b> & <b>Math 34600</b> (or <b>Math 39200</b> ) 3 cr.	<b>CE 43500</b> Dynamics of CE Systems Pre: CE 33200, <b>CE 31500</b> , <b>Math 34600</b> (or <b>Math 39200</b> ) 3 cr.	<b>Liberal Arts<sup>4</sup></b> (20000 or higher) 3 cr.
<b>Environmental</b> CE 56600: Engr Hydrol.; and either CE 58300: Air Pollution and Control or CE 58400: Solid Waste Management  <b>Structures</b> CE 44000: FEA of Structures CE 44200: Structural Design 6 cr.			<b>Transportation</b> CE 52000: Traffic Engineering CE 54000: Highway Eng'ng	<b>Multidisciplinary</b> (take two courses) CE 44000: FEA of Structs CE 44200: Structl Design CE 52000: Traffic Eng'ng CE 54000: Highway Eng'ng CE 56600: Engr Hydrol. Either CE 58300: Air Poll. & Ctrl. Or CE 58400: Solid Waste	
<b>Specialization Electives</b> (Take 2 courses from same specialization option selected above)			<b>CE 40100</b> Review of Civil Eng'ng Fundamentals (Pass/Fail) Pre: Upper junior or senior standing 1 cr.	<b>CE 50900</b> Senior Design Project Pre: senior standing Pre/Co: CE 32600, CE 32700, CE 47400, & CE 44100. 3 cr.	<b>CE 40500</b> Civil Engineering Management Pre: CE 34000, CE 31600 3 cr.
<b>Environmental</b> CE 48200: Water & Waste CE 51003: Indep. Study CE 57100: Water Quality CE 58300: Air Poll & Ctrl CE 58400: Solid Waste Engr 30100: Intro Satellite Engr 59910: Intro to GIS Chem 26100: Org. Chem. I CE 45100: Env Water Res			<b>Transportation</b> CE 50500: Constr. Proj. Man CE 51003: Indep. Study CE 52500: Geo. Des. Facil. CE 52600: Rail Sys Design CE 54100: Hwy & Airport CE 54500: Urban Transport. CE 54700: Urban Freight CE 54800: Transit Systems CE 56600: Engr Hydrology CE 59000: Foundation Engr	<b>Structures</b> CE 51003: Indep. Study CE 53000: Adv Strength CE 54000: Highway Eng'ng CE 55000: Adv Reinf Concrete CE 55500: Concrete Sustainability CE 59000: Foundation Eng'ng ME 46100: Eng'ng Materials 6 cr.	<b>Multidisciplinary</b> (take two more courses from this category above)

1. The latest version of the curriculum sheet supersedes any curriculum and pre-/corequisite information in the Undergraduate Bulletin or online.

2. "C" Passing Grade Requirement: Courses in shaded area (■) require a minimum passing grade of "C".

3. Skills tests: Certain students may be required to pass CUNY Assessment Tests in one or more subjects within 1 or 2 years of admission.

4. Liberal Arts electives: CE students must take six approved courses (18 credits) of which at least two (6 credits) must be at the 20000 level or higher. A list of approved courses is posted on the School of Engineering web site at [ccny.cuny.edu/engineering/gen-ed](http://ccny.cuny.edu/engineering/gen-ed) and can be viewed at the Office of Undergraduate Affairs (ST-209) or the Office of Student Programs (ST-2M7).

• Each course falls into one or more liberal arts clusters, specified in the list. The six courses must collectively occupy at least three clusters. The four clusters are: (f) Professional and Ethical Responsibilities, (g) Communication, (h) Global and Societal Context, and (j) Contemporary Issues.

• Most students must also satisfy Pathways liberal arts requirements. See [ccny.cuny.edu/engineering/pathways](http://ccny.cuny.edu/engineering/pathways).

5. Other Graduation Requirements: Apply for graduation during registration for the last semester. Minimum GPA of 2.00. Minimum QPA of zero. Residency Requirement: 33 credits of 30000-level or higher Civil Engineering courses taken at CCNY.

6. Transfer students with credit for Math 20200 are considered too advanced for Engr 10100. They may satisfy this 1-credit requirement by either taking CE 51001 (Independent Study with a design component) or CE 31000 (CE Policy and Design, Co-req: CE 32600 and CE 37200).

7. Program Changes: Substitution of other courses for required courses must be approved by the Chair of the Civil Engineering Department (ST-136), and the Associate Dean of the Office of Undergraduate Affairs (ST-209).

Total Credits: 136 – 137.