

**THE CITY COLLEGE – SCHOOL OF ENGINEERING**

**NOTE:** In Fall 2020, ENGR 101 will be replaced with CE 10100 (pre: PHYS 207 (min C); ENGL 21007)

**Civil Engineering Curriculum  
Fall 2019 – Spring 2020**

**February 13, 2020  
July 22, 2020 (BW)**

<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>See note above</b>	<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>Engl 21007</b> Writing for Engineering Pre: Eng 11000 or FIQWS  3 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> , Engl 21007  3 cr.	<b>Science Elective</b>	
<b>Math 39100</b> Differential Equations Pre: Math 21300  3 cr.	<b>Math 34600</b> <b>Linear Algebra</b> <b>Pre: Math 21300</b> <b>or</b> <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.), <b>CE 10100</b> 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, <b>CE 10100</b> 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>  (Fall Only)  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  (Spring Only)  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)<sup>8</sup></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> )  (Fall Only)  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> )  (Fall Only)  3 cr.	<b>Liberal Arts<sup>4</sup></b> (20000 or higher)   3 cr.
<b>Specialization Electives<sup>8</sup></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  (Spring Only)  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  (Spring Only)  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  6 cr.	<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>ENGR 59910: Intro to GIS</b>  6 cr.	<b>Structures</b> CE 44000: FEA of Structures CE 44200: Structural Design  6 cr.	<b>Multidisciplinary</b> (take two courses from this category above) CE 51003: Indep. Study CE 53000: Adv Strength CE 54000: Highway Eng'ng CE 55000: Adv Reinf Concrete CE 55500: Concrete Sustainability CE 54700: Foundation Eng'ng ME 46100: Eng'ng Materials  6 cr.	<b>Liberal Arts<sup>4</sup></b> (20000 or higher)   3 cr.	<b>Liberal Arts<sup>4</sup></b> (20000 or higher)   3 cr.

- The latest version of the curriculum sheet supersedes any curriculum and pre-/corequisite information in the Undergraduate Bulletin or online.
  - “C” Passing Grade Requirement: Courses in shaded area (■) require a minimum passing grade of “C”.
  - Skills tests: Certain students may be required to pass CUNY Assessment Tests in one or more subjects within 1 or 2 years of admission.
  - Liberal Arts electives:** CE students must take six approved courses, of which at least two must have course numbers of 20000 or higher. Four of the courses should satisfy Flexible Core (Pathways) liberal arts requirements in the Creative Expression (CE), World Cultures & Global Issues (WCGI), Individual & Society (IS), and U.S. Experience (US) areas. Prior courses in these four areas from other colleges can satisfy the electives. The remaining two courses must be chosen from the list on the Grove School of Engineering web site at [ccny.cuny.edu/engineering/gen-ed](http://ccny.cuny.edu/engineering/gen-ed).
- See [ccny.cuny.edu/engineering/pathways](http://ccny.cuny.edu/engineering/pathways) for details and the Pathways course lists. A prior degree may remove the requirement of all six courses.
- 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.
  - ~~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).~~ See note above
  - 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).
  - All elective courses are on rotation.

**Total Credits: 136 – 137.**