NOTE: In Fall 20, ENGR 101 is being replaced with CE 59901 (pre: PHYS 207 (min C); ENGL 21007)

THE CITY COLLEGE – SCHOOL OF ENGINEERING
Civil Engineering Curriculum
Fall 2019 – Spring 2020

~~February 13, 2020~~
March 20, 2020 (BW)

Math 20100 Calculus I Pre: Math 19500 (C min.) 4 cr.	**Chem 10301** General Chemistry I Pre: Math 19500 (C min.) 4 cr.	**Engl 11000**[6] Freshman Composition 3 cr.	~~**Engr 10100**[6]~~ ~~Engineering Design~~ ~~Pre/Co: Math 19500 (min.C)~~ 1 cr. See note above	**CSc 10200** Introduction to Computing Pre: Math 19500 (C min.) or Pre/Co: Math 20100 (C min.) 3 cr.	**Liberal Arts**[4] . 3 cr.
Math 21200 Calculus II Pre: Math 20100 (C min.) 4 cr.	**Chem 10401** General Chemistry II Pre: Chem 10301, (C min.) 4 cr.	**Phys 20700** General Physics I Pre/Co: Math 21200 4 cr.	**CE 20900** Structural and Site Plans Pre/Co: CSc 10200 3 cr.	**Engl 21007** Writing for Engineering Pre: Eng 11000 or FIQWS 3 cr.	
Math 21300 Calculus III Pre: Math 21200 (C min.) 4 cr.	**CE 23100** Statics Pre: Phys 20700 (C min.), Math 21200 (C min.) & CSc 10200; Co: Math 21300 3 cr.	**Phys 20800** General Physics II Pre: Phys 20700 Pre/Co: Math 21300 4 cr.	**CE 26400** CE Data Analysis Pre: CSc 10200 Pre/Co: Math 21300 , Engl 21007 3 cr.	**Science Elective** **EAS 32800** Global Environ. Haz Or **Bio 10100** Bio Foundatns. 3 - 4 cr.	
Math 39100 Differential Equations Pre: Math 21300 3 cr.	**Math 34600** Linear Algebra Pre: Math 21300 or **Math 39200** Linear Algebra/Vector Ana Pre: Math 21300 3 cr.	**CE 35000** Fluid Mechanics Pre: CE 23100 (C min.), CSc 10200 Pre/Co: Math 39100 (C min.) 3 cr.	**CE 33200** Mechanics Deformable Bodies Pre: CE 23100 (C min.) Pre/Co: Math 39100 (C min.) & CE 26400 4 cr.	**Engineering Science Elective** **Engr 23000** Thermodynamics Pre: Chem 10301 (C min.), Pre/Co: Phys 20800 (C min.) & Math 21300 (C min.) Or **Engr 20400** Electrical Circuits Pre/Co: Phys 20800 (C min), Math 21300 (C min) 3 cr.	
CE 34000 Structural Analysis Pre: CE 33200, CE 20900 Co: CE 31500 & Math 34600 (or Math 39200) 3 cr.	**CE 36500** Hydraulic Engr. Pre for CE majors: CE 35000 (C min.). Pre for ESE majors: CE 35000 or ME 35600 or ChE 34100. 3 cr.	**CE 31500** Computational Methods in CE Pre: Math 39100 (C min.), CE 26400 & CE 23100, CSc 10200 Co: Math 34600 (or Math 39200) 3 cr.	**CE 32600** Transportation Planning Pre: CE 26400 Pre/Co: CE 31500 (Fall Only) 3 cr.	**CE 37200** 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.	**Liberal Arts**[4] 3 cr.
CE 34500 Soil Mechanics Pre: CE 35000 (C min.), CE 26400 & CE 33200 3 cr.	**CE 44100** Reinforced Concrete Pre: CE 26400 & CE 34000 3 cr.	**CE 32700** Transportation Systems Engr. Pre: CE 26400, CE 33200, CE 20900 (Spring Only) 3 cr.	**CE 47400** Environment Engineering Pre: CE 36500 & CE 37200 3 cr.	**Liberal Arts**[4] 3 cr.	**Liberal Arts**[4] 3 cr.
Specialization Core *(select one of the four areas)* ***Environmental*** CE 56600: Engr Hydrol.; ***and either*** CE 58300: Air Pollution and Control **or** CE 58400: Solid Waste Management ***Transportation*** CE 52000: Traffic Engineering CE 54000: Highway Eng'ng ***Multidisciplinary*** *(take two courses)* CE 44000: FEA of Structrs 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 ***Structures*** CE 44000: FEA of Structures CE 44200: Structural Design 6 cr.			**CE 31600** CE Decision & Systems Analysis Pre: CE 26400, CE 31500 & Math 34600 (or Math 39200) (Fall Only) 3 cr.	**CE 43500** Dynamics of CE Systems Pre: CE 33200, CE 31500, Math 34600 (or Math 39200) (Fall Only) 3 cr.	**Liberal Arts**[4] (20000 or higher) 3 cr.
Specialization Electives [8] *(Take 2 courses from same specialization option selected above)* ***Environmental*** 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 ***Transportation*** 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 ENGR 59910: Intro to GIS ***Structures*** 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 ***Multidisciplinary*** *(take two more courses from this category above)* 6 cr.				**CE 40100** Review of Civil Eng'ng Fundamentals (Pass/Fail) Pre: Upper junior or senior standing (Spring Only) 1 cr.	**CE 50900** Senior Design Project Pre: senior standing Pre/Co: CE 32600, CE 32700, CE 47400, & CE 44100. 3 cr.	**CE 40500** Civil Engineering Management Pre: CE 34000, CE 31600 (Spring Only) 3 cr.	**Liberal Arts**[4] (20000 or higher) 3 cr.

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, 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 .

   See ccny.cuny.edu/engineering/pathways for details and the Pathways course lists. A prior degree may remove the requirement of all six courses.
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).~~ See note above
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).
8. All elective courses are on rotation.

Total Credits: 136 – 137.