Civil Engineering Curriculum
Fall 2013 – Spring 2014

Math 20100 Calculus I Pre: Math 19500 (C min.) 3 cr.	**Chem 10301** General Chemistry I Pre: Math 19500 4 cr.	**Engl 11000** Freshman Composition 3 cr.	**Engr 10100**[6] Engineering Design Pre/Co: Math 19500 (min.C) 1 cr.	**Liberal Arts** (10000 or higher) 3 cr.	**Liberal Arts** (10000 or higher) 3 cr.
Math 20200 Calculus II Pre: Math 20100 (C min.) 3 cr.	**Chem 10401** General Chemistry II Pre: Chem 10301, C min. ~~(or 10300)~~ 4 cr.	**Phys 20700** General Physics I Pre/Co: Math 20200 4 cr.	**CSc 10200** Introduction to Computing Pre: Math 19500 (C min.) or Pre/Co: Math 20100 (C min.) 3 cr.	**Eng 21007** Writing for Engineering Pre: Eng 11000 or FIQWS 3 cr.	
Math 20300 Calculus III Pre: Math 20200 (C min.) 4 cr.	**CE 23100** Structural Mechanics Pre: Phys 20700 (C min.), Math 20200 (C min.) & CSc 10200 Pass All 3 cr.	**Phys 20800** General Physics II Pre: Phys 20700 Pre/Co: Math 20300 4 cr.	**CE 20900** Structural and Site Plans Pre/Co: CSc 10200 ~~& ACT/SKAT~~ 3 cr.	**CE 26400** CE Data Analysis Pre: CSc 10200 ~~& ACT/SKAT~~ Pre/Co: Math 20300 (C min.), Engl21007 3 cr.	
Math 39100 Differential Equations Pre: Math 20300 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.	**Science Elective** **EAS 32800:** Global Environ. Haz. Or **Bio 350000**: Microbiology 3 cr.		**Liberal Arts** 3 cr.
Math 39200 Linear Algebra/Vector Pre: Math 20300 3 cr.	**CE 34000** Structural Analysis Pre: CE 33200, CE 20900 Pre/Co: CE 33500 & Math 39200 3 cr.	**CE 36500** Hydrology & Hydraulic Engr. Pre: CE 35000 (C min) or ME 35600 or ChE 34100 3 cr.	**CE 33500** Computational Methods in CE Pre: Math 39100 (C min.), CE 26400 & 33200, CSc 10200 Pre/Co: Math 39200 3 cr.	**CE 32600** Transportation Planning Pre: CE 26400 Pre/Co: CE 33500 3 cr.	**CE 37200** Environmental Impact Assessment Pre: CE 26400 & Chem 10401 (C min) & [CE 35000 (C min) or ME 35600 or ChE 34100] 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 31600** CE. Decision & Sys. Analysis Pre: CE 26400, CE 33500 & Math 39200 3 cr.	**CE 32700** Transportation Systems Engr. Pre: CE 26400 Pre/Co: CE 34500 3 cr.	**Engineering Science Elective** **Engr 23000:** Thermodynamics Pre: Chem 10301 (C min.), Phys 20800 (C min.) & Math 20300 (C min.) Or **Engr 20400:** Electrical Circuits Pre/Co: Phys 20800 (C min), Math 20300 (C min) 3 cr.	
Specialization Core *(select one of the four areas)* ***Environmental*** CE 45100: Env. Water Resource CE 48200: Environmental Eng'ng II ***Transportation*** CE 52000: Traffic Engineering CE 54000: Highways Eng'ng ***Structures*** CE 44000: FEA of Structures CE 44200: Structural Design ***Multidisciplinary*** *(take two courses)* CE 44000: FEA of Structrs CE 44200: Structl Design CE 45100: Env Water Rsrcs CE 48200: Env Engr II CE 52000: Traffic Eng'ng CE 54000: Highway Eng'ng 6 cr.			**CE 40500** Civil Engineering Mgmt Pre: CE 34000, CE 31600 3 cr.	**CE 43500** Dynamics of CE Systems Pre: CE 33200 & CE33500, Math 39200 3 cr.	**CE 47400** Environment Engineering Pre: CE 36500 & CE 37200 3 cr.	**Liberal Arts** (20000 or higher) 3 cr.
Specialization Electives ***(Take 2 courses from same specialization option selected above)*** ***Environmental*** Bio 35000: Microbiology CE 51000: Indep. Study CE 57100: Water Quality Chem 26100: Org. Chem. I ***Transportation*** CE 50500: Constr. Proj. Man CE 51000: Indep. Study CE 52500: Geo. Des. Facil. CE 52600: Rail Sys Design CE 54100: Hwy & Airport CE 54500: Urban Transport. CE 59000: Foundation Engr ***Structures*** CE 51000: Indep. Study CE 53000: Adv Strength CE 55000: Adv Reinf Concrete CE 59000: Foundation Eng'ng ME 46100: Eng'ng Materials ***Multidisciplinary*** *(take two more courses from this category above)* 6 cr.				**CE 40100** Reviews of Eng'ng Fundamentals (Pass/Fail) Pre: Senior /Graduate 1 cr.	**CE 50900** Senior Design Project Pre: senior standing Pre/Co: CE 32600, CE 32700, CE 47400 & CE 44100. 3 cr.	**Liberal Arts** 3 cr.	**Liberal Arts** (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. **General Education/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 http://www.ccny.cuny.edu/engineering/genreq.html 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 general education *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.
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 should take the 1-credit design project course CE 51000 (Independent Study) instead.
7. **Program Changes:** Substitution of other courses for required courses must be approved by the Chair of the Civil Engineering Department (ST-119), and the Associate Dean of the Office of Undergraduate Affairs (ST-209).

Total Credits: 134.