CCNY CIVIL ENGINEERING DEPARTMENT
Planned Rotation of Courses (8/11/20) - SUBJECT TO CHANGE

Common Core Courses - Undergraduate

Core courses		Cr	Hrs	FALL	SPRING	Notes
CE 10100	Introduction to CE (pre: Engl 21007, Phy 20700)	1	3	x		1
CE 20900	Structural and Site Plans (pre/co: CSc 102)	3	4	x	x	
CE 23100	Statics (pre: CSc 102, Math 212, Phy 207; co: Math 213)	3	5	x	x	
CE 26400	CE Data Analysis (pre: CSc 102, co: Engl 21007, Math 213)	3	5	x	x	
CE 30100	Policy and Design	1	1		x	2
CE 31500	Numerical & Computational Methods in CE (pre: CE 101, 231, 264, CSc 102, Math 391; co: Math 346)	3	5	x	x	
CE 31600	CE Decision and Systems Analysis (pre: CE 264, 315, Math 346)	3	3	x		
CE 32600	Transportation Planning (pre: CE 264; co: CE 315)	3	3	x		
CE 32700	Transportation Systems Engineering (pre: CE 209, 264, 332)	3	3		x	
CE 33200	Mech. of Deform. Bodies (pre: CE 101, 231; co: CE 264, Math 391)	4	5	x	x	
CE 34000	Structural Analysis (pre: CE 209, 332; co: CE 315, Math 346)	3	5	x	x	
CE 34500	Soil Mechanics (pre: CE 264, 332, 350)	3	5	x	x	
CE 35000	Fluid Mechanics (pre: CE 101, 231; co: Math 391)	3	3	x	x	
CE 36500	Hydraulic Engineering (pre: CE 350)	3	5	x	x	
CE 37200	Environmental Impact Assessment (pre: Chem 104, CE 264, 350)	3	3	x	x	
CE 40100	Review of Engineering Fundamentals (pre: upper junior)	1	3		x	3
CE 40500	Civil Engineering Management (pre: CE 316, 340)	3	3		x	
CE 43500	Dynamics of CE Systems (pre: CE 315, 332, Math 346)	3	3	x		
CE 44100	Reinforced Concrete (pre: CE 264, 340)	3	5	x	x	
CE 47400	Environmental Engineering (pre: CE 365, 372)	3	5	x	x	
CE 50900	Senior Design Project (pre: CE 326, 327, 441, 474)	3	4	x	x	

Specialization courses

CE 44000	Finite Elements Analysis of Structures (pre: CE 315, 340, Math 346)	3	3		x	
CE 44200	Structural Design (pre: CE 264, 340)	3	3	x		
CE 5xxxx	Structural engineering elective courses	3	3	x	x	4
CE 56600	Engineering Hydrology (pre: CE 264, 365)	3	3		x	
CE 58300	Solid Waste Management (co: CE 474)	3	3	x		4
CE 58400	Air Pollution and Control (pre: CE 372, pre: Math 391)	3	3	x		4
CE 5xxxx	Environmental or water resources elective courses	3	3	x	x	4
CE 52000	Traffic Engineering (pre: CE 327, co: CE 316, 326)	3	3	x		
CE 54000	Highway Engineering (pre: CE 327, co: CE 326)	3	3		x	
CE 5xxxx	Transportation elective courses	3	3	x	x	4

Notes

1 This course replaces the ENGR 101 requirement for all CE students, freshmen or transfers
2 This course will be offered for a final time in Spring 2121 for graduating seniors who have not taken ENGR 101 or CE 101.
3 Pass the CE 401, a 10 week course, OR pass the NCEES FE exam
4 These courses are offered on a one or two year rotation as shown on next pages.

Specialization Courses - Undergraduate and Graduate

** Note: CE 51003 is not a course. It is an opportunity for undergraduate seniors to do research with a full time faculty member on a high-level topic related to their specialization. Faculty members may impose additional pre-requisites to ensure that students are prepared to undertake the particular research project. CE 51003 is not an option for undergraduate students specializing in "multidisciplinary". Details about eligibility and how to register for it can be found on the CE Website under "Info for students".

Multidisciplinary (Option for undergraduates only)		**FALL EVEN years**	**SPRING ODD years**	**FALL ODD years**	**SPRING EVEN years**
CE 440	Finite Element Analy. of Struct. (pre: CE 315, 340, Math 346)		X		X
CE 442	Structural Design (pre: CE 264, 340)	X		X	
CE 520	Traffic Engineering (pre: CE 327, co: CE 316, 326)	X		X	
CE 540	Highway Engineering (pre: CE 327, co: CE 326)		X		X
CE 566	Engineering Hydrology (pre: CE 264, 365)		X		X
CE 583	Air Pollution & Control (co: CE 474, pre: Math 391)	X			
Or CE 584	Or Solid Waste Management (co: CE 474)			X	

Environmental Engineering/Water Resources (aka WREE)		**FALL EVEN years**	**SPRING ODD years**	**FALL ODD years**	**SPRING EVEN years**
ENGR 30100	Intro to Remote Sensing (pre: Math 213, Phys 207)		X		X
ENGR 59910	Intro to GIS (pre: CE 264)	X		X	
CE 482	Water & Wastewater Treatmt. Design (pre: CE 474)			X	
CE 51003	3-credit independent Study (pre: CE 340, others) **	X	X	X	X
CE 566 / ~~H1200~~H6600	Engineering Hydrology (pre: CE 264, 365)		X		X
CE 571 / H7100	Water Quality Analysis (pre: CE 474)		X		
CE 583 / H8300	Air Pollution & Control (pre: CE 372, pre: Math 391)			X	
CE 584 / H8400	Solid Waste Management (co: CE 474)	X			
CE G0800	GIS in WREE (pre: ENGR 59910)				X
CE G7300	Surface Water Quality Modeling (pre: CE 315, 372)				X
CE G7800	Solid Waste Reuse and Recycling (pre: CE 474)		X		X
CE G8100	Macro-Scale Hydrology (pre: CE 365)	X			
CE G9500	Remote Sensing in WREE (pre: ENGR 30100)			X	
CE G9700	Numerical Methods & Sim of Fluid Flow (pre: CE 315)		X		
CE G9800	Sustainability in Engineering (pre: CE 372)		X		
CE H0700	Advanced Hydraulics (pre: CE 365)	X		X	
CE H0800	Applied Hydraulics (pre: CE 365)		X		
CE ~~G4500~~H1100	Advanced Data Analysis (pre: CE 264)	X			
CE ~~G9100~~H6100	Water & Environ. Resources System Analy. (pre: CE 264)			X	
CE H7500	Principles of Drinking Water Treatment (pre: CE 474)		X		
CE H7600	Principles of Biological Wastewater Treat. (pre: CE 474)	X			
CE H7700	Biological Systems in Environmental Engineering				X
CE H7900	Water Reuse & Reclamation (pre: TBD)			X	
CE ~~G8400~~I8100 or CE ~~G8600~~H8200	Air Quality Modeling (pre: CE H1000, CE 372) or Air Pollution Measurement (pre: CE 372)	X			

Specialization Courses - Undergraduate and Graduate

Structures		**FALL EVEN years**	**SPRING ODD years**	**FALL ODD years**	**SPRING EVEN years**
CE 440	Finite Element Analy. of Struct. (pre: CE 315, 340, Math 346)		X		X
CE 442	Structural Design (pre: CE 264, 340)	X		X	
CE 51003	3-credit independent Study (pre: CE 340, others) **	X	X	X	X
CE 530 / H3000	Advanced Strength of Materials (pre: CE 315, 332, Math 346)	X		X	
CE 540 / H4000	Highway Engineering (pre: CE 327, co: CE 326)		X		X
CE 550 / H5000	Advanced Reinforced Concrete (pre: CE 315, CE 441)	X		X	
CE 555 / H5500	Concrete Sustainability (pre: ??)				X
CE 590 / H9000	Foundation Engineering (pre: CE 315, CE 345)		X		X
CE G0200	High-Rise Building Design and Analysis (pre: CE 440, 441, 442)	X			
CE H5100	Prestressed Concrete (pre: CE 315, CE 441)		X		
CE H5200	Bridge Engineering (pre: CE 440, 441, 442)			X	
CE H5300	Advanced Structural Design (pre: CE 315, 442)		X		X
CE I1700	Finite Element Methods in Engr. (pre: CE 440, 530)		X		X
CE I3000	Structural Dynamics (pre: CE 435, 440, co: CE H1000)		X		X
CE I3500	Applied Elasticity & Plasticity (pre: CE 530, co: CE H1000)	X		X	
CE I5400	Linear & Nonlinear Analysis of Structures (pre: CE 440)	X			
CE I5600	Earthquake Engineering (pre: CE I3000)			X	

Transportation		**FALL EVEN years**	**SPRING ODD years**	**FALL ODD years**	**SPRING EVEN years**
CE 51003	3-credit independent Study (pre: CE 340, others) **	X	X	X	X
CE 520 / H2000	Traffic Engineering (pre: CE 327, co: CE 316, 326)	X		X	
CE 526 / H2600	Rail System Design (pre: CE 327)	X			
CE 540 / H4000	Highway Engineering (pre: CE 327, co: CE 326)		X		X
CE 541 / H4100	Highway & Airport Construction (pre: CE 327, co: CE 326)			X	
CE 545 / H4500	Urban Transportation (pre: CE 326)				X
CE 547 / H4700	Urban Freight and City Logistics (pre: CE 326)		X		
CE 548 / H4800	Transit Systems: Planning and Operations (pre: CE 326)	X			
CE 566 / H6600	Engineering Hydrology (pre: CE 26400, CE 365)		X		X
CE 590 / H9000	Foundation Engineering (pre: CE 315, 345)		X		X
CE G4900	Transportation Network Analysis (pre: CE 316, CE 326)	X			
CE G5600	Travel Demand Forecasting (pre: CE 264, 326)			X	
CE H0200	Transportation Economics (pre: CE 3160 CE 326)		X		X
CE I2400	Analytical Techniques in Transportation (pre: CE 316, 326)	X		X	
CE I2600	Urban Transportation Planning (pre: CE 326)		X		X
CE I2700	Transportation Policy (pre: CE 326)			X	
SUS 7100B	Sustainable Transportation (pre: CE 326)	X		X	