

CIVIL ENGINEERING DEPARTMENT

Planned Rotation of Courses- SUBJECT TO CHANGE

(2/28/2018 BW)

Undergraduate Core Courses

		Cr	Hrs	FALL	SPRING	Notes
CE 20900	Structural and Site Plans	3	4	x	x	
CE 23100	Statics	3	5	x	x	
CE 26400	CE Data Analysis	3	5	x	x	
CE 31000	Policy and Design	1	1		x	1
CE 31600	CE Decision and Systems Analysis	3	3	x		
CE 32600	Transportation Planning	3	3	x		
CE 32700	Transportation Systems Engineering	3	3		x	
CE 33200	Mechanics of Deformable Bodies	4	5	x	x	
CE 33500	Numerical & Computational Methods in CE	3	5	x	x	
CE 34000	Structural Analysis	3	5	x	x	
CE 34500	Soil Mechanics	3	5	x	x	
CE 35000	Fluid Mechanics	3	3	x	x	
CE 36500	Hydraulic Engineering	3	5	x	x	
CE 37200	Environmental Impact Assessment	3	3	x	x	
CE 40100	Review of Engineering Fundamentals	1	3		x	2
CE 40500	Civil Engineering Management	3	3		x	
CE 43500	Dynamics of CE Systems	3	3	x		
CE 44100	Reinforced Concrete	3	5	x	x	
CE 47400	Environmental Engineering	3	5	x	x	
CE 51001	Independent study (1 credit)	1	1	x	x	3
CE 50900	Senior Design Project	3	4	x	x	

Specialization courses

CE 44000	Finite Elements Analysis of Structures	3	3		x	
CE 44200	Structural Design	3	3	x		
CE 5xxxx	Structural engineering elective	3	3	x	x	4
CE 56600	Engineering Hydrology	3	3		x	
CE 58300	Solid Waste Management (even years)	3	3	x		
CE 58400	Air Pollution and Control (odd years)	3	3	x		
CE 5xxxx	Environmental or water resources elective	3	3	x	x	4
CE 52000	Traffic Engineering	3	3	x		
CE 54000	Highway Engineering	3	3		x	
CE 5xxxx	Transportation elective	3	3	x	x	4

Notes

- 1 This course can be taken by transfer students who transferred into the GSOE with Math 202 to satisfy the ENGR 101 requirement.
- 2 10 week course OR pass the FE exam

- 3 CE 51001 can be taken by transfer students who transferred into the GSOE with Math 202 to satisfy the ENGR 101 requirement. It is not a course. It is an opportunity to do research with a full time faculty member on any CE topic and must include some design. Faculty members may impose pre-requisites to ensure that students are prepared to undertake the particular research project. Details about eligibility and how to register for it can be found on the CE Website under "Info for students".
- 4 These classes rotate in on a one or two year cycle (see "Undergraduate Electives and Graduate Courses").

Undergraduate Electives and Graduate Courses

** Note: CE 51003 is not a course. It is an opportunity for 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".

Environmental Engineering/Water Resources		Fall even years	Spring odd years	Fall odd years	Spring even years
ENGR 59910	Intro to GIS (pre: CE 26400)	X		X	
CE 51003	3-credit independent Study (pre: CE 34000, others) **	X	X	X	X
CE 58400 / H8400	Solid Waste Management (co: CE 47400)	X			
CE G4500 H1100	Advanced Data Analysis (pre: CE 26400)	X			
CE G8100	Macro-Scale Hydrology (pre: CE 36500)	X			
CE G8400 H8100 or CE G8600H8200	Air Quality Modeling (pre: CE H1000, CE 37200) Air Pollution Measurement (pre: CE 37200)	X			
CE H0700	Advanced Hydraulics (pre: CE 36500)	X			
CE H7600	Principles of Biological Wastewater Treatment (pre: CE 47400)	X			
CE 56600 / H1200 H6600	Engineering Hydrology (pre: CE 26400, CE 36500)		X		X
CE 57100 / H7100	Water Quality Analysis (pre: CE 47400)		X		
CE G9700	Numerical Methods & Sim of Fluid Flow (pre: CE 33500)		X		
CE G9800	Sustainability in Engineering (pre: CE 37200)		X		
CE H0800	Applied Hydraulics (pre: CE 36500)		X		
CE H7500	Principles of Drinking Water Treatment (pre: CE 47400)		X		
ENGR 30100	Intro to Remote Sensing (pre: Phys 208, Math 203)		X		X
CE 48200	Water & Wastewater Treatmt. Design (pre: CE 47400)			X	
CE 58300 / H8300	Air Pollution & Control (co: CE 47400, pre: Math 391)			X	
CE G9100 H6100	Water & Environ. Resources System Analysis (pre: CE 26400)			X	
CE G9500	Remote Sensing in WREE (pre: ENGR 30100)			X	
CE H0700	Advanced Hydraulics (pre: CE 36500)			X	
CE H7900	Water Reuse & Reclamation (pre: TBD)			X	
CE G0800	GIS in WREE (pre: ENGR 59910)				X
CE G7300	Surface Water Quality Modeling (pre: CE 37200, CE 33500)				X
CE H7200 G7100	Principles of Water & Waste Water Quality (pre: CE 47400)				X

Structures		Fall even years	Spring odd years	Fall odd years	Spring even years
CE 44200	Structural Design (pre: CE 26400, CE 34000)	X		X	
CE 51003	3-credit independent Study (pre: CE 34000, others) **	X	X	X	X
CE 53000 / H3000	Advanced Strength of Materials (pre: CE 33200, CE 33500, Math 392)	X		X	
CE 55000 / H5000	Advanced Reinforced Concrete (pre: CE 33500, CE 44100)	X		X	
CE G0200	High-Rise Building Design and Analysis (pre: CE 44000, CE 44100, CE 44200)	X			
CE H5200	Bridge Engineering (pre: CE 44000, CE 44100, CE 44200)	X			
CE H5700	Condition Assessment & Rehab. of Structures (pre: CE 34000, CE 44100, CE 44200)	X			
CE I3500	Applied Elasticity & Plasticity (pre: CE 53000, co: CE H1000)	X		X	
CE 44000	Finite Element Analysis of Structures (pre: CE 33500, CE 34000, Math 392)		X		X
CE 54000 / H4000	Highway Engineering (pre: CE 32700, co: CE 32600)		X		X
CE 59000 / H9000	Foundation Engineering (pre: CE 33500, CE 34500)		X		X
CE H5100	Prestressed Concrete (pre: CE 33500, CE 44100)		X		
CE H5300	Advanced Structural Design (pre: CE 33500, CE 44200)		X		X
CE I1700	Finite Element Methods in Engr. (pre: CE 44000, CE 53000)		X		X
CE I3000	Structural Dynamics (pre: CE 43500, CE 44000, co: CE H1000)		X		X
CE I5400	Linear & Nonlinear Analysis of Structures (pre: CE 44000)			X	
CE I5600	Earthquake Engineering (pre: CE I3000)			X	
CE 55500 / H5500	Concrete Sustainability (pre: ??)				X
CE I5500	Stability of Structures (pre: CE 44000, CE 53000, co: CE H1000)				X

Transportation		Fall even years	Spring odd years	Fall odd years	Spring even years
CE 51003	3-credit independent Study (pre: CE 34000, others) **	X	X	X	X
CE 52000 / H2000	Traffic Engineering (pre: CE 32700, co: CE 32600, CE 31600)	X		X	
CE 52600 / H2600	Rail System Design (pre: CE 32700)	X			
CE 54800 / H4800	Transit Systems: Planning and Operations (pre: CE 32600)	X			
CE G4900	Transportation Network Analysis (pre: CE 31600, CE 32600)	X			
CE I2400	Analytical Techniques in Transportation (pre: CE 31600, CE 32600)	X		X	
SUS 7100B	Sustainable Transportation (pre: CE 32600)	X		X	
CE 54000 / H4000	Highway Engineering (pre: CE 32700, co: CE 32600)		X		X
CE 54700 / H4700	Urban Freight and City Logistics (pre: CE 32600)		X		
CE 56600 / H6600	Engineering Hydrology (pre: CE 26400, CE 36500)		X		X
CE 59000 / H9000	Foundation Engineering (pre: CE 33500, CE 34500)		X		X
CE G2700	Multimodal Transportation Tech (pre: CE 32600, CE 32700)		X		
CE H0200	Transportation Economics (pre: CE 31600, CE 32600)		X		X
CE I2600	Urban Transportation Planning (pre: CE 32600)		X		X
CE 54100 / H4100	Highway & Airport Construction (pre: CE 32700, co: CE 32600)			X	
CE G5600	Travel Demand Forecasting (pre: CE 26400, 32600)			X	
CE I2700	Transportation Policy (pre: CE 32600)			X	
CE 54500 / H4500	Urban Transportation (pre: CE 32600)				X
CE G3100	For-Hire Transportation (pre: CE 32600)				X

Multidisciplinary (Option for undergraduates only)		Fall even years	Spring odd years	Fall odd years	Spring even years
CE 44200	Structural Design (pre: CE 26400, CE 34000)	X		X	
CE 52000	Traffic Engineering (pre: CE 32700, co: CE 32600, CE 31600)	X		X	
CE 58400 or CE 58300	Solid Waste Management (co: CE 47400)	X			
	Air Pollution & Control (co: CE 47400, pre: Math 391)			X	
CE 44000	Finite Element Analysis of Structures (pre: CE 33500, CE 34000, Math 392)		X		X
CE 54000	Highway Engineering (pre: CE 32700, co: CE 32600)		X		X
CE 56600	Engineering Hydrology (pre: CE 26400, CE 36500)		X		X
CE 58300	Air Pollution & Control (co: CE 47400, pre: Math 391)			X	