

2017 - 2018 Curriculum Requirements for MS-SDC Degree

- denotes limited class enrollment * - denotes online version of on-campus offering \$ - CEE 222A and CEE 222B must be taken as a pair

AREA	Autumn		Winter		Spring		CONCENTRATION REQUIREMENTS							
	Class	Units	Class	Units	Class	Units	Management	Structures	Energy	Water	SUS			
Building, Infrastructure, and Urban System Development	241A	Infrastructure Project Development, Moscovich	3	222A [*]	Computer Integrated A/E/C, Fruchter	3	222B [*]	Computer Integrated A/E/C, Fruchter	2					
	243	Intro to Urban Systems Engineering, Jain	3	220C	BIM Parametric Design and Optimization, Katz	2,3,4	241C	Global Projects Seminar, Sedar	1,2					
	228	Methods in Urban Systems I	3	328A	Multidisciplinary Design of Bldg. Envelopes, Flager	3	248S	Real Estate Seminar, Kroll/Bridwell	1					
	224X [*]	Sustainable Urban Systems Project	3,4,5	228B	Methods in Urban Systems II	3	246B	Real Estate Finance, Koen	3					
				230	Urban Development and Governance	3	224Z [*]	Sustainable Urban Systems Project	3,4,5					
			224Y [*]	Sustainable Urban Systems Project	3,4,5									
Structures	101C	Geotechnical Engineering, Borja	3,4	282	Nonlinear Struct Analysis, Deierlein	3,4	290	Structural Performance Failure, Moncarz	2					
	203	Probabilistic Models in Civil Engineering, Gupta	3,4	283	Structural Dynamics, Law	3,4	287	Earthquake Resist Design, Miranda	3,4					
	280	Advanced Structural Analysis, Deierlein	3,4	182	Design of RC Structures, Lepech	4	288	Intro to Performance-based EQ Eng, Kiremidjian	3					
	181	Design of Steel Structures, Law	4	285B	Advanced Struct Steel Design, Miranda	3,4								
	285A	Advanced Struct Conc Design, Billington	3,4	293	Foundation Engineering, Wren	2,3								
Water Infrastructure	264A	Rivers, Streams, and Canals, Koseff	3,4	262B	Transport and Mixing in Surface Water, Monismith	3,4	179C [*]	Environmental Engineering Design, Robertson	5					
	266A	Watersheds and Wetlands, Freyberg	3	262C	Modeling Environmental Flows, Fringer	3	265A	Sustainable Water Res. Development, Ortolano	3					
	262A	Hydrodynamics, Fringer	3,4	269B	Fluid Mechanics and Hydrology Seminar, Kitinidis	1	266C	Topics in Hydrology and Water, Freyberg	3					
	269A	Fluid Mechanics and Hydrology Seminar, Fringer	1	271A	Physical and Chemical Treatment Processes, Luthy	3	269C	Fluid Mechanics and Hydrology Seminar, Koseff	1					
	270	Movement and Fate of Organics in Water, Luthy	3	271B	Environmental Biotechnology, Criddle	4	271D	Wastewater Treatment Processes, Appleton	2					
	177	Aquatic Chemistry and Biology, Criddle	4	279	Environmental Engineering Seminar, Hildemann	1	279	Environmental Engineering Seminar, Hildemann	1					
	279	Environmental Engineering Seminar, Hildemann	1	266B	Floods, Doughts, Dams & Aqeducts, Freyberg	3	101B	Mechanics of Fluids, Fong	4					
	265D	Water & Sanitation in Developing Countries, Davis	1,2,3				274D	Pathogens and Disinfections, Criddle	3					
	207A	Understanding Energy, Woodward	3	EN101	Energy & Environment, Kovscek	3	EN102	Renewable Energy Sources, Gerritsen	3					
	207F	Understanding Energy - Field Trips, Woodward	1	176A	Energy Efficient Buildings, Masters	3,4	176B	Electric Power: Renewable, Masters	3,4					
207W	Understanding Energy - Workshop, Woodward	1	256	Building Systems, Kolderup	4	226E	Energy Efficient Building Design, Rumsey	2,3						
226	Life Cycle Assessment, Lepech	3,4	301	Energy Seminar, Benson	1	272R	Power Systems, Rajagopal	3						
301	Energy Seminar, Benson	1				278C	Indoor Air Quality, Hildemann	2,3						
						301	Energy Seminar, Benson	1						
Construction	241	Manage Fabrication & Construction, Fischer	4	202	Legal Aspects of Construction, Groves et al.	3,4	212B	Adv Industry Applications of VDC, Kam	2,3,4					
	252P	Construction Engineering Practicum, Staff	3	212A	Advanced Industry Applications of VDC, Kam	2,3,4	246	Entrepreneurship in CEE, Levitt	4					
				241B	Infrastructure Project Delivery, Sedar	3								
				249	Labor Industrial Relations, Walton	2								
				241P	Fabrication & Construction Practicum Fischer	3,4								
				242	Organization Design Project, Levitt	3,4								
Industry Context	241A	Infrastructure Project Development, Moscovich	3	227	Project Finance, Bennon	3,4,5	241C	Global Projects Seminar, Sedar	1,2					
	258	Watson Seminar, Sedar	1	298	Structural Engineering Seminar, Staff	1	246	Entrepreneurship in CEE, Levitt	3,4					
	323A	Infrastructure Finance and Governance, Levitt	1	320	Integrated Facility Engin Seminar, Staff	1	246B	Real Estate Finance, Koen	3					
				323B	Infrastructure Finance and Governance, Levitt	1	248S	Real Estate Seminar, Kroll/Birdwell	1					
							297M	Managing Critical Infrastructure, McCann	2					
							320	Integrated Facility Engin Seminar, Staff	1					
Skills	220A	Bldg Information Modeling, Katz	2,3,4	E103	Public Speaking, Vassar	3	220B	Building Information Modelling Workshop, Katz	2,3,4					
	244	Const. Accounting & Finance, Tucker/Meyer	2	220S	Bldg Information Modeling (online), Katz	2,3,4	E103	Public Speaking, Vassar	3					
	E103	Public Speaking, Vassar	3	246A	Engineering Economy, Koen	3	220S	Bldg Information Modeling (online), Katz	2,3,4					
	322	Data Analytics for Urban Systems, Rajagopal	3				251 [*]	Negotiation, Christensen	3					
	220S	Bldg Information Modeling (online), Katz	2,3,4				245	Network Analysis for Urban Systems, Jain	3					
	228	Methods in Urban Systems I	3											
Total							30	30	30	30	30			

General Requirements applicable to degree:

Other Degree Requirements	1) Required classes and approved electives must total at least 45 units;	5) All courses at or above 100 level, at least 30 units at or above 200 level;
	2) Program proposal must be approved by advisor;	6) Maximum of 5 total units of seminars;
	3) Comply with the CEE Graduate Degrees Handbook (http://cee.stanford.edu/documents/CEE_GR_Handbook.pdf);	7) Average Letter Grade Indicator (GPA) of at least 2.75 for courses in program
	4) All courses offered for a letter grade must be taken for a letter grade	8) Required courses taken at other institutions must have a letter grade indicator of 2.67 (B-) or above
		9) Credit for classes listed in multiple areas may be split between those areas (no double counting)

Additional Concentration Requirements - A concentration is required of all students. Italicized prerequisite courses are required unless a waiver is granted by your advisor. Bold courses are required to be taken at Stanford.

Management	Structures	Energy	Water (Resources)	Water (Treatment and Management)	Sustainable Urban Systems
CEE 101C	CEE 246A	CEE 244	CEE 101B	CEE 101B	CS 106A (Programming)
CEE 181 or 182	CEE 180 (Struct Analysis)	CEE 246A	CEE 101C	CEE 101C	E 202W
CEE 244	CEE 181	CS 106A (Programming)	CEE 101D (Programming)	CEE 101D (Programming)	CEE 246A
CEE 246A	CEE 182	E202W	CEE 246A	CEE 246A	CEE 241
CS 106A (Programming)	CS 106A (Programming)	CEE 176A	E202W	CEE 270	CEE 258
E202W	E202W	CEE 226	CEE 258	CEE 177	CEE 226
CEE 241	CEE 241	CEE 241	CEE 241	E202W	CEE 224S
CEE 226	CEE 226	CEE 256 or 226E	CEE 226	CEE 258	CEE 228
CEE 242	CEE 285A	CEE 258	CEE 269A	CEE 241	CEE 230
CEE 252P	CEE 285B	CEE 241C	CEE 266A	CEE 226	CEE 224X
CEE 258	CEE 258		CEE 266A	CEE 226	CEE 224Y
CEE 241C	CEE 298		CEE 266B	CEE 271A	CEE 224Z
				CEE 271B	
				CEE 279	