

**2020 - 2021 Curriculum Requirements for MS-SDC Degree**

# - denotes limited class enrollment    \$ - CEE 222A and CEE 222B must be taken as a pair    & - must enroll in correct section with faculty instructor

AREA	Autumn		Winter		Spring		CONCENTRATION REQUIREMENTS			
	Class	Units	Class	Units	Class	Units	Management	Structures	Energy	SUS
<b>Building, Infrastructure, and Urban System Development</b>	218X	Shaping the Future of the Bay Area	3,4,5	218Y	Shaping the Future of the Bay Area	3,4,5	3	3	6	12
	241A	Infrastructure Project Development	3	222A <sup>\$</sup>	Computer Integrated A/E/C	3				
	322	Data Analytics for Urban Systems	3	224A	Design & Operation of Integrated Infra. Systems	3				
				222B <sup>\$</sup>	Computer Integrated A/E/C	2				
				241C	Global Projects Seminar	1,2				
<b>Structures</b>	101C	Geotechnical Engineering	3,4	182	Structural Design	4		12		
	203	Probabilistic Models in Civil Engineering	3,4	282	Nonlinear Struct Analysis	3,4				
	280	Advanced Structural Analysis	3,4	283	Structural Dynamics	3,4				
	285A	Advanced Struct Conc Design	3,4	288	Intro to Performance-based Earthquake Engin	3				
				293	Foundation Engineering	2,3				
<b>Energy &amp; Atmosphere</b>	226	Life Cycle Assessment	3,4	EN101	Energy & Environment	3	3	3	9	6
	301	Energy Seminar	1	176A	Energy Efficient Buildings	3,4				
	330	Racial Equity in Energy	2,3	301	Energy Seminar	1				
<b>Construction</b>	241	Managing Fabrication & Construction	4	102A	Legal Principles in Design, Construction, & Deliv	3	12	5	6	5
	244	Engineering Accounting & Finance (Summer Qtr)	3	202	Legal Aspects of Construction	3,4				
				240	Project Assessment and Budgeting	3				
				241B	Infrastructure Project Delivery	3				
				242	Organization Design	3,4				
				327	Construction Robotics	3				
				341	Virtual Design and Construction	3				
<b>Industry Context</b>	151A	Race in Science, Technology & Medicine: Scienc	1	151B	Race in Science, Technology & Medicine: Tech	1	8	3	5	3
	241A	Infrastructure Project Development	3	227 <sup>\$</sup>	Project Finance	3,4,5				
	258	Watson Seminar	1	298	Structural Engineering Seminar	1				
	323A	Infrastructure Finance and Governance	1							
<b>Skills</b>	146S	Engineering Economics and Sustainability	3	220B	Building Information Modeling Workshop	2,3,4	4	4	4	4
	244	Engineering Accounting & Finance (Summer Qtr)	3	242R	Project Risk Analysis	3				
	322	Data Analytics for Urban Systems	3							
<b>Total</b>										
							<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>

<b>General Requirements applicable to degree:</b>	
<b>Other Degree Requirements</b>	1) Required classes and approved electives must total at least 45 units 2) Program proposal must be approved by advisor 3) Comply with the CEE Graduate Degrees Handbook ( <a href="https://cee.stanford.edu/student-resources">https://cee.stanford.edu/student-resources</a> ) 4) During COVID Quarters (Summer 2020 - Summer 2021) all courses offered for a letter grade do not need to be taken for a letter grade 5) All courses at or above 100 level, at least 30 units at or above 200 level 6) Maximum of 5 total units of seminars 7) Average Letter Grade Indicator (GPA) of at least 2.75 for courses in program 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	Sustainable Urban Systems
CS 106A	CS 106A	CS 106A	CS 106A
CEE 146S	CEE 146S	CEE 146S	CEE 146S
CEE 101C	CEE 180	CEE 244	<b>E 202W or E 202C or E 203</b>
CEE 182	CEE 182	<b>E 202W or E 202C or E 203</b>	CEE 226
CEE 244	<b>E 202W or E 202C or E 203</b>	CEE 176A	CEE 241
<b>E 202W or E 202C or E 203</b>	CEE 226	CEE 226	CEE 258
CEE 226	CEE 241	CEE 241	<b>Two or more of the following (a maximum of 9 units from the 218 series can count towards the 12 units required in Building, Infrastructure, and Urban System Development)</b>
CEE 241	CEE 258	CEE 241C	CEE 218X
CEE 241C	CEE 285A	CEE 258	CEE 218Y
CEE 258	CEE 285B	CEE 176A or 226E or 256	CEE 218Z
	CEE 298	<b>(minimum 2 of these 3)</b>	