

Civil Engineering Flow Chart (Environmental Concentration) 2015-2016

	Semester Course Hours						Semester Hours	Semester Offered	Course Number	Title	Pre-Requisites	
Term 1	CHM 114	FSE 100	ENG 101	MAT 265	HU/SB	ASU 101	2	F, S	FSE 100	Intro Civil Engineering	CEE student	
	Gen Chem	Intro to CE	Fr Comp	Calc I	Elective	ASU Exp	3	F, S, SU	CEE 210	Statics	FSE 100, MAT 266, PHY 121/122	
							3	F, S, SU	CEE 212	Dynamics	CEE 210, MAT 275	
	4	2	3	3	3	1	16	3	F, S, SU	CEE 213	Deformable Solids	CEE 210, MAT 275
Term 2	MAT 242	ENG 102	MAT 266	PHY121/122	CEE 181		3	F, S	CEE 300	Eng Business Practice	junior/senior standing, MAT 267	
	Lin Alg	Fr Comp	Calc II	Physics I	Tech/Soc/Sus		4	F, S	CEE 321	Structural Analysis & Design	CEE 212, CEE 213, CEE 384	
							4	F, S	CEE 341	Fluid Mechanics	CEE 212, CEE 213, pre/co-req CEE 384	
							4	F, S, SU	CEE 351	Geotechnical Engineering	CEE 213	
	2	3	3	3+1	3		15	3	F, S, SU	CEE 353	Civil Engineering Materials	CEE 213
Term 3	CEE 210	MAT 267	PHY131/132	MAT 275	ECN		4	F, S	CEE 361	Intro to Envrn Engineering	CEE 213, CHM 114 or CHM 116 (D), pre/co-req IEE 380 (D)	
	Statics	Calc III	Physics II	Mod Diff Q	201/211/212		4	F, S	CEE 372	Transportation Engineering	CEE 213, pre/co-req IEE 380 (D)	
							3	F, S	CEE 384	Numerical Methods	MAT 242, MAT 275, pre/co-req MAT 267	
							3	F, S	CEE 400	Earth Systems Eng Mgt	CEE 300	
	3	3	3+1	3	3		16	3	F	CEE 440	Hydrology	CEE 341 or MAE 340
							3	S	CEE 441	Water Resource Engineering	CEE 341	
Term 4	Basic Sci	CEE 213	CEE 212	MAE 240	IEE 380		3	S	CEE 462	Unit Operations	CEE 361	
	Elective	Def Solids	Dynamics	Thermo	Prob/Stats		3	F	CEE 466	Urban Water System Design	CEE 341, CEE 361	
							3	F	CEE 467	Environmental Microbiology	CEE 361 or MIC 220	
							3	F, S	CEE 486	Integrated Civil Eng Design	last semester and department consent	
	3	3	3	4	3		16					
Term 5	CEE 384	CEE 353	CEE 341	CEE 361			4	F, S	MAE 240	Thermofluids I	CEE 212	
	Num Meth	CE Mat	Fluid Mech	Env Eng			3	F, S, SU	IEE 380	Prob Stats Eng Prob Solving	MAT 266	
	3	3	4	4			14	3	F, S, SU	MAT 242	Elementary Linear Algebra	MAT 265
Term 6	CEE 300	CEE 372	CEE 321	CEE 351			3	F, S, SU	MAT 265	Calculus for Engineers I	MAT 170 or equiv	
	Eng Bus	Trans Eng	Struct Analys	Geo Eng			3	F, S, SU	MAT 266	Calculus for Engineers II	MAT 265	
							3	F, S, SU	MAT 267	Calculus for Engineers III	MAT 266	
							3	F, S, SU	MAT 275	Modern Differential Equations	MAT 267	
	3	4	4	4			15	3	F, S, SU	PHY 121	Univ Physics I: Mechanics	MAT 265 , pre/co-req MAT 266
Term 7	CEE 400	CEE 440	CEE 466	CEE 467	Tech		1	F, S, SU	PHY 122	Univ Physics Lab I	pre/co-req PHY 121	
	Erth Sys	Hydro	Urb Water	Env Micro	Elective		3	F, S, SU	PHY 131	Univ Physics II: Elect & Mag	MAT 266, PHY 121, pre/co-req MAT 257	
							1	S, SU	PHY 132	Univ Physics Lab II	pre/co-req PHY 131	
	3	3	3	3	3		15	4	F, S, SU	CHM 114	General Chemistry	1 year high school chemistry
Term 8	HU/SB	CEE 441	CEE 462	CEE 486								
	Elective	Water Res	Unit Op	Int Design								
	3	3	3	4								

General Studies - 15 hours (5 classes)

HU	CEE 400
HU	
SB	ECN
SB	
UD	CEE 400
C	
G	
H	CEE 400

13
TOTAL: 120

TECHNICAL ELECTIVES

CEE 281, 412, 420, 421, 452, 474, 481, 483, 493, 495, BIO 320, BCH 361, CHM 302, 341, PUP 442, 475

Recommended Basic Science: CHM 231

Recommended SB: COM 100, 110, 320, GCU 141, 361, 442

Recommended HU: CEE 181, CON 101, APH 100, PUP 100, 200

Notes

F-Fall, S-Spring, SU-Summer

All pre-reqs require a "C" minimum, unless otherwise specified

Technical and design electives can be replaced by independent study CEE 499 or 500-level courses for seniors with a GPA of 3.0 or better and an approved petition