

# Major Map: Civil Engineering – Bachelor of Science in Engineering (B.S.E.) Ira A. Fulton School of Engineering, Tempe Campus Catalog Year: 2009-2010

	Γ		Completed ATP: Yes No		Completed AGEC:			
Course Subject and Title		Upper	Transfer	Minimum Grade if				
(courses in <b>bold/shading</b> are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes			
TERM ONE: 0-15 CREDIT HOURS					Complete CHM 114 on 116, MAT 265 with a			
ASU 101-FSE: The ASU Experience CEE 100: Intro to Civil and Environmental Engineering OR	1				Complete CHM 114 or 116; MAT 265 with a minimum grade of "C"			
ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic				Grade of C in	ASU 101-FSE should be completed first semester.			
Principles or ECN 201: Economic Issues & Analysis (SB)	2 or 3			CEE 100	An SAT, ACT, Accuplacer, or TOEFL score			
CHM 114: General Chemistry for Engineers (SQ) OR		_			determines placement into first-year composition courses			
CHM 116: General Chemistry II* (SQ)	4			~	ASU Math Placement Exam score determines			
MAT 265: Calculus for Engineers I	3			Grade of C	placement in Mathematics course			
					*CHM 113 is a prerequisite and does not apply toward degree credit.			
ENG 101 or 102: First-Year Composition OR					**If ENG 105 a 3 hr applicable elective must also be			
ENG 105: Advanced First-Year Composition** OR		_			taken prior to graduation. See Advisor.			
ENG 107 or 108: English for Foreign Students	3			Grade of C				
TERM TWO: 16-30 CREDIT HOURS	1			1	C LA CEP 100 MAT 242 266 PUN 121 0			
CEE 100: Intro to Civil and Environmental Engineering OR ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic				Grade of C in	Complete CEE 100; MAT 242, 266; PHY 121 & 122 each with a minimum grade of "C"			
Principles or ECN 201: Economic Issues & Analysis (SB)	2 or 3			CEE 100	122 eden war a minimum grade or			
MAT 242: Elementary Linear Algebra	2			Grade of C				
MAT 266: Calculus for Engineers II	3			Grade of C				
PHY 121/122: University PhysicsI/ Laboratory I (SQ)	3/1			Grade of C				
ENG 101 or 102: First-Year Composition OR								
ENG 105: Advanced First-Year Composition** OR ENG 107 or 108: English for Foreign Students	3			Grade of C				
TERM THREE: 31-45 CREDIT HOURS	3			Grade of C				
	3			Grade of C	• Complete CEE 210; MAT 267, 275, PHY 131 &			
CEE 210: Engineering Mechanics: Statics	3			Grade of C	132 each with a minimum grade of "C"			
MAT 267: Calculus for Engineers III				Grade of C	Complete First-Year Composition requirement:			
MAT 275: Modern Differential Equations (MA) PHY 131/132: University Physics II: Electricity and Magnetism/	3			Grade of C	ENG 101 & 102 or ENG 107 & 108 or ENG 105			
Laboratory II (SQ)	3/1			Grade of C				
TERM FOUR: 46-60 CREDIT HOURS								
CEE 212: Engineering Mechanics: Dynamics	3			Grade of C	Complete CEE 212, CEE 213 each with a			
CEE 213: Introduction to Deformable Solids	3			Grade of C	minimum grade of "C"			
EEE 202: Circuits I OR		_						
MAE 240: Thermofluids I	4							
Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global								
Awareness (G):	3							
Basic Science Elective:	3							
TERM FIVE: 61-75 CREDIT HOURS								
#CEE 384: Numerical Methods for Engineers (CS)	3			Grade of C	# Designates Major Course: A minimum cumulative			
Select 3					GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE			
# CEE 300: Engineering Business Practice (L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs)					4XX courses. NOTE: A maximum of two "D" grades			
# CEE 321: Structural Arthritysis and Design (4 hrs)  # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs)					are allowed in all 3XX and 4XX courses combined.			
# CEE 351: Geotechnical Engineering (4 hrs)								
# CEE 353: Civil Engineering Materials (3 hrs)	10							
# CEE 361: Introduction to Environmental Engineering (4 hrs)  # CEE 372: Transportation Engineering (4 hrs)	10- 12	$\boxtimes$		Grade of C in each				
IEE 380: Probability and Statistics for Engineering Problem Solving	3							
TERM SIX: 76-90 CREDIT HOURS								
Select remaining 4					# Designates Major Course: A minimum cumulative			
# CEE 300: Engineering Business Practice(L) (3 hrs)					GPA of 2.30 required in all CEE 3XX courses, a			
# CEE 321: Structural Analysis and Design (4 hrs) # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs)					minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades			
# CEE 351: Geotechnical Engineering (4 hrs)					are allowed in all 3XX and 4XX courses combined.			
# CEE 353: Civil Engineering Materials (3 hrs)	l							
# CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs)	14 - 16			Grade of C in each				
TERM SEVEN: 91-105 CREDIT HOURS	10			Grade of C III caell				
#CEE 400 Earth Systems Engineering and Management (HU, H) OR					Technical Elective and Design Elective			
Social & Behavioral Science (SB) AND Cultural Diversity in the US				Grade of C in CEE	requirements: Complete a total of 2 design electives			
(C) or Global Awareness (G)	3			400	and 4 technical electives during Term 7 and Term 8 See Advisor for guidance in selection. # Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grade are allowed in all 3XX and 4XX courses combined.			
# Technical Elective	3	⊠		Grade of C				
# Technical Elective	3	⊠		Grade of C				
# Design Elective or # Technical Elective	3			Grade of C				
# Design Flective or # Technical Flective	2			Grade of C				
# Design Elective or # Technical Elective	3	$\boxtimes$		Grade of C				

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Course Subject and Title	**	Upper	Transfer	Minimum Grade if	AUS TOWN IN A STATE OF THE STAT
(courses in <b>bold/shading</b> are critical)	Hrs.	Division	Course/Grade	Required	Additional Critical Requirement Notes
TERM EIGHT: 106-120 CREDIT HOURS					
# CEE 400: Earth Systems Engineering and Management (HU, H)					<ul> <li>Technical Elective and Design Elective</li> </ul>
OR					requirements: Complete a total of 2 design electives
Social & Behavioral Science (SB) AND Cultural Diversity in the US		_		Grade of C in CEE	and 4 technical electives during Term 7 and Term 8.
(C) or Global Awareness (G) if CEE 400 completed	3			400	See Advisor for guidance in selection.
# CEE 486: Integrated Civil Engineering Design (L)	4	$\boxtimes$		Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a
# Technical Elective or # Design Elective	3	$\boxtimes$		Grade of C	minimum cumulative GPA of 2.30 required in all CEE
# Technical Elective or # Design Elective	3	$\boxtimes$		Grade of C	4XX courses. NOTE: A maximum of two "D" grades
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the					are allowed in all 3XX and 4XX courses combined.
US (C) or Global Awareness (G)	3				

### **Graduation Requirements Summary:**

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.30 Min. CUM GPA in CEE 3XX, 2.30 min CUM GPA in CEE 4XX))	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

## General University Requirements: Legend

- General Studies Core Requirements:
  - o Literacy and Critical Inquiry (L)
  - o Mathematical Studies (MA)
  - $\circ \qquad Computer/Statistics/Quantitative \ applications \ (CS)$
  - o Humanities, Fine Arts, and Design (HU)
  - o Social and Behavioral Sciences (SB)
  - o Natural Science-Quantitative (SQ)
  - Natural Science-General (SG)
- General Studies Awareness Requirements
  - o Cultural Diversity in the US (C)
  - o Global Awareness (G)
  - o Historical Awareness (H)
- First-Year Composition

# **Additional Notes:**

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