

**U.A. WHITAKER COLLEGE OF ENGINEERING**  
**BACHELOR OF SCIENCE IN CIVIL ENGINEERING (B.S.)**  
**128 Credits Total**

Freshman Year						
Semester 1 (Fall Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	EGS 1006L	Intro to Engineering Profession	1	MAC 1147	Fa, Sp	Meet with an engineering academic advisor and have a smart plan on file. Smart plans will be completed with the advisor and available to the student.
	ENC 1101	Composition I	3		Fa, Sp,Su	
	XXX XXXX	State Core Humanities*	3		Fa, Sp,Su	
	MAC 2311	Calculus I	4	MAC 1147 or MAC 2157	Fa, Sp,Su	
	CHM 1045 & 1045L	General Chemistry I w/ Lab	4		Fa, Sp,Su	
	<b>Total</b>	<b>15</b>				
Semester 2 (Spring Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	EGN 1041C	Computational Tools for Engineering	2	MAC 2311 and EGS 1006L	Fa, Sp	Complete MAC 2311 with a minimum grade of "C"
	PHY 2048 & 2048L	General Physics I w/lab	4	MAC 2311	Fa, Sp,Su	
	MAC 2312	Calculus II	4	MAC 2311	Fa, Sp,Su	
	ENC 1102	Composition II	3	ENC 1101	Fa, Sp,Su	
	XXX XXXX	Social Science* (recommend ECO 2013 or ECO 2023)	3		Fa, Sp,Su	
	<b>Total</b>	<b>16</b>				
Summer	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	XXX XXXX	State Core Social Science* (rec AMH 2020 or POS 2041)	3		Fa, Sp,Su	
	XXX XXXX	Unrestricted Elective	3		Fa, Sp,Su	
	XXX XXXX	Humanities*	3		Fa, Sp,Su	
	<b>Total</b>	<b>9</b>				

Sophomore Year						
Semester 3 (Fall Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	EGM 3420C	Engineering Mechanics	4	PHY 2048 & 2048L	Fa, Sp	Complete EGN 1041C with a minimum grade of "C".
	MAC 2313	Calculus III	4	MAC 2312	Fa, Sp,Su	
	GLY 1010C or 2030C	Physical Geology (4) OR Environmental Geology (3)	3		Fa, Sp,Su	
	PHY 2049 w/lab	General Physics II w/lab	4	MAC 2312 and PHY 2048 & 2048L	Fa, Sp,Su	
	<b>Total</b>	<b>15</b>				
Semester 4 (Spring Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	EGN 3331C	Mechanics of Materials	3	EGM 3420C and EGN 1041C	Sp, Su	Complete MAC 2312 and PHY 2048 w/lab with a minimum grade of "C".
	EGN 2111C	Engineering Computer Graphics	3	MAC 2311	Fa, Sp	
	ENV 3006C	Fundamentals of Environmental Engineering	3	PHY 2048 & 2048L, MAC 2312, and CHM 1045 & 1045L	Sp, Su	
	MAP 2302	Differential Equation	3	MAC 2312	Fa, Sp,Su	
STA 2037/ STA 2023	Statistics with Calculus OR Statistical Methods	3		Fa, Sp,Su		
	<b>Total</b>	<b>15</b>				

**\*Special Notes:**

Students must earn at least 9 semester hours by attending one or more summer sessions. To meet the Civic Literacy Requirement, students must pass either AMH 2020 or POS 2041 AND the Civil Literacy Exam.

Students should be sure one of their social science or humanities include 1 course that is designated with an attribute for College Level Writing Skills (CLWS), 2 courses that are designated with an attribute for Intercultural Knowledge (INKN), and 1 course that satisfies the Civic Literacy requirement. Please be aware that 1 course may satisfy multiple attributes. Example: AML 2010 = Humanities, College Level Writing, and Intercultural Knowledge (GEHM, CLWS, INKN)

\*Prerequisites for Coursework (all prerequisites require a minimum grade of C)  
 \*\* The Technical Electives must be approved by the Civil Engineering Program

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Junior Year						
Semester 5 (Fall Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	EGN 3441C	Data Sci & Eng Sys Analysis	3	(STA 2023 or STA 2037), EGN 1041, and either EGM 3420C or ENV 3006C	Fa, Sp	Complete EGM 3420C with a minimum grade of "C".
	CCE 3101C	Civil Engineering Materials	3	EGN 3331C	Fa	
	CWR 3201C	Engineering Fluid Mechanics	3	MAP 2302, EGM 3420C, and PHY 2049 & 2049L	Fa	
	CGN 3323C	Surveying and Geomatics	3	EGM 3420C	Fa, Sp	
	XXX XXX	Humanities*	3		Fa, Sp,Su	
	<b>Total</b>	<b>15</b>				

Semester 6 (Spring Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	CEG 3011C	Geotechnical Engineering I	3	CWR 3201C and EGN 3331C	Sp	Complete EGN 3331C with a minimum grade of "C".
	TTE 3002C	Transportation Engineering	3	CGN 3323C and (STA 2037 or STA 2023)	Sp	
	CES 3100C	Structural Analysis	3	EGN 3331C and EGN 2111C	Sp	
	XXX XXXX	Unrestricted Elective (3-4 credits to meet 128 for degree).	4		Fa, Sp,Su	
	CWR 3202C	Hydrology and Hydraulics	3	CWR 3201C and (STA 2037 or STA 2023)	Sp	
	<b>Total</b>	<b>16</b>				

Senior Year						
Semester 7 (Fall Term)	Course	Course Title	CR	Prerequisites	Offered	Milestone
	CCE 4204C / CEG 4012C	Construction Methods & Managmt OR Geotechnical Engineering II	3	CEG 3011C (same for both)	Fa / Fa,Su	Make a graduation check appointment with advising. Apply for graduation by the deadline.
	XXX XXXX	Technical Elective 1	3		Fa, Sp,Su	
	CES 4702C/4605C	Reinforced Concrete Design OR Steel Design	3	CES 3100C and CCE 3101C / CES 3100C	Fa	
	CCE 4031C	Project Planning and Regulations	3	EGN 2111C	Fa	
	CWR 4540C	Water Resource Design	3	CWR 3202C	Fa	
	<b>Total</b>	<b>15</b>				

Semester 8 (Spring Term)	Course	Course Title	CR	Prerequisites	Offered	Milestone
	CGN 4802	Civil Engineering Senior Design	3	EGN 3441C, CEG 3011C, CCE 4031C, CWR 4540C, TTE 3002C, ENV 3006C, and (CES 4702C or CES 4605C)	Sp	
	ENV 4612C	Sustainability in Engineering	3	ENV 3006C	Sp	
	IDS 3920	University Colloquium	3		Fa, Sp,Su	
	XXX XXXX	Technical Elective 2	3		Fa, Sp,Su	
		<b>Total</b>	<b>12</b>			

Engineering Common Core	10
Engineering Courses unique to B.S. in Civil Engineering	30
Engineering Courses shared by Civil and Environmental Engineering	18

General Education & Other Required Courses	70
<b>Total Engineering Credits</b>	<b>58</b>
<b>Total Degree Credits</b>	<b>128</b>

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