

**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 w/lab	General Chemistry I w/ Lab	4		Fa, Sp,Su	
	Total		15			

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 2048C	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	
	Total		16			

Summer	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	XXX XXXX	State Core Social Science* (recommend AMH 2020 or POS 2041)	3		Fa, Sp,Su	
	XXX XXXX	Unrestricted Elective	3		Fa, Sp,Su	
	XXX XXXX	Humanities*	3		Fa, Sp,Su	
	Total		9			

Sophomore Year						
Semester 3 (Fall Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	EGM 3420C	Engineering Mechanics	4	PHY 2048C	Fa, Sp	Complete EGN 1041C with a minimum grade of "C".
	MAC 2313	Calculus III	4	MAC 2312	Fa, Sp,Su	
	GYL 1010C or 2030C	Physical Geology (4) OR Environmental Geology (3)	3		Fa, Sp,Su	
	PHY 2049C	General Physics II w/lab	4	MAC 2312 and PHY 2048C	Fa, Sp,Su	
	Total		15			

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 2048C with a minimum grade of "C".
	EGN 2111C	Engineering Computer Graphics	3	MAC 2311	Fa, Sp	
	ENV 3006C	Fundamentals of Environmental Engineering	3	PHY 2048C, MAC 2312, CHM 1045 and CHM 1045L	Sp, Su	
	MAP 2302	Differential Equation	3	MAC 2312	Fa, Sp,Su	
	XXX XXX	Humanities*	3		Fa, Sp,Su	
	Total		15			

***Special Notes:**

Students must earn at least 9 semester hours by attending one or more summer sessions.

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 3641C	Engineering Entrepreneurship	3	EGN 3433C	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 2049C	Fa	
	CGN 3323C	Surveying and Geomatics	3	EGM 3420C	Fa, Sp	
	STA 2037/ STA 2023	Statistics with Calculus OR Statistical Methods	3		Fa, Sp,Su	
		Total	15			

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	
		Total	16			

Senior Year						
Semester 7 (Fall Term)	Course	Course Title	CR	Prerequisites	Offered	Milestone
	CEG 4012C	Geotechnical Engineering II	3	CEG 3011C	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/4605	Reinforced Concrete Design OR Steel Design	3	CES 3100C AND CCE 3101C / CES 3100C	Fa	
	CCE 4031C	Project Planning and Regulations	3	EGN 3641C	Fa	
	CWR 4540C	Water Resource Design	3	CWR 3202C	Fa	
		Total	15			

Semester 8 (Spring Term)	Course	Course Title	CR	Prerequisites	Offered	Milestone
	CGN 4802	Civil Engineering Senior Design	3	CEG 4012C, (CCE 4031 OR CCE 4031C), CWR 4540C, TTE 3002C, ENV 3006C, (CES 4702C OR CES 4605)	Sp	
	ENV 4612C	Sustainability in Engineering	3	ENV 3006C AND (CCE 4031 OR CCE 4031C)	Sp	
	IDS 3920	University Colloquium	3		Fa, Sp,Su	
	XXX XXXX	Technical Elective 2	3		Fa, Sp,Su	
		Total	12			

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
Total Engineering Credits	58
Total Degree Credits	128

***Special Notes:**

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*Prerequisites for Coursework (all prerequisites require a minimum grade of C)

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