

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

Freshman Year						
Semester 1 (Fall Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone 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	
	COP 1500	Intro to Computer Science	3	MAC 1105	Fa, Sp	
	MAC 2311	Calculus I	4	MAC 1147 or MAC 2157	Fa, Sp, Su	
	XXX XXXX	Science Elective	4		Fa, Sp, Su	
	Total		14			
Semester 2 (Spring Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	ENC 1102	Composition II	3	ENC 1101	Fa, Sp, Su	
	MAC 2312	Calculus II	4	MAC 2311	Fa, Sp, Su	
	COP 2006	Programming I	3	COP 1500	Fa, Sp	
	XXX XXXX	Social Science* (recommend ECO 2013 or ECO 2023)	3		Fa, Sp, Su	
	Total		13			
Summer	Course	Course Title	CR	Prerequisites*	Offered	Milestone Complete COP 1500 and MAC 2311, both with a minimum grade of "C".
	XXX XXXX	Humanities*	3		Fa, Sp, Su	
	STA 2023	Statistical Methods	3		Fa, Sp, Su	
	XXX XXXX	State Core Social Science* (AMH 2020 or POS 2041)	3		Fa, Sp, Su	
	Total		9			

Sophomore Year						
Semester 3 (Fall Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone
	COP 3003	Programming II	3	COP 2006 & MAC 2312	Fa, Sp	
	PHY 2048 & 2048L	General Physics I and lab	4	MAC 2311	Fa, Sp, Su	
	XXX XXXX	Humanities*	3		Fa, Sp, Su	
	MAD 3107	Discrete Mathematics	3	MAC 2311	Fa, Sp	
	XXX XXXX	Math Elective (3-4)	3		Fa, Sp, Su	
	Total		16			
Semester 4 (Spring Term)	Course	Course Title	CR	Prerequisites*	Offered	Milestone Complete COP 2006 and MAC 2312, both with a minimum grade of "C".
	COP 3530	Data Structures & Algorithms	3	COP 3003 & MAD 3107	Sp	
	XXX XXXX	State Core Humanities*	3		Fa, Sp, Su	
	PHY 2049 & 2049L	General Physics II and lab	4	PHY 2048 and lab & MAC 2312	Fa, Sp, Su	
	CDA 3104 or CDA 3200	Computer Org & Assem Lang Prog or Digital Systems & Architecture	3	PHY 2048 and lab & COP 2006	Sp	
Total		13				

***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 Civic 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 Software Engineering Program

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Junior Year						
	Course	Course Title	CR	Prerequisites*	Offered	Milestone
Semester 5 (Fall Term)	CEN 3941, CEN 4083, CEN 4721, COP 3350 OR COT 3400	Internship, Cloud Computing, Human Computer Interaction, Systems Admin & Prog, OR Algorithms.	3	COP 3530 (except COP 3350 prereq. is COP 2006)	Fa, Sp	
	XXX XXXX	Math Elective	3	MAC 2312	Fa, Sp, Su	
	CEN 3031	Software Engng Fundamentals	3	COP 3530	Fa	
	COP 4610	Operating Systems	3	COP 3530 & (CDA 3104 or CDA 3200)	Fa	
	XXX XXXX	Unrestricted Elective (3-4)	4		Fa, Sp	
	Total		16			

	Course	Course Title	CR	Prerequisites*	Offered	Milestone
Semester 6 (Spring Term)	CEN 3073	Requirements Engineering and Analysis	3	CEN 3031 & (STA 2037 or STA 2023)	Sp	
	CEN 4072	Software Testing	3	CEN 3031	Sp	
	COP 3710	Intro to Data Engineering	3	COP 3530	Sp	
	XXX XXXX	SE Elective - Must be approved by department	3	Varies - usually COP 3530	Fa, Sp	
	CEN 3078	Computer Security	3	COP 3003	Sp	
	Total		15			

Senior Year						
	Course	Course Title	CR	Prerequisites	Offered	Milestone
Semester 7 (Fall Term)	CEN 4065	Software Architecture & Design	3	CEN 3031	Fa	Complete COP 3530 and CEN 3031, both with a minimum grade of "C". Make appointment for a graduation check with advising. Apply for graduation per the University deadline.
	CEN 4934	Senior Software Engr Project I	3	CEN 3073	Fa	
	CEN 3941, CEN 4083, CEN 4721, COP 3350 OR COT 3400	Internship, Cloud Computing, Human Computer Interaction, Systems Admin & Prog, OR Algorithms.	3	COP 3530 (except COP 3350 prereq. is COP 2006)	Fa, Sp	
	XXX XXXX	SE Elective - Must be approved by department	3	Varies - usually COP 3530	Fa, Sp	
		Total		12		

	Course	Course Title	CR	Prerequisites	Offered	Milestone
Semester 8 (Spring Term)	CEN 4935	Senior Software Engr Project II	3	CEN 4934	Sp	
	XXX XXXX	SE Elective - Must be approved by department	3	Varies - usually COP 3530	Fa, Sp	
	XXX XXXX	SE Elective - Must be approved by department	3	Varies - usually COP 3530	Fa, Sp	
	IDS 3920	University Colloquium	3		Fa, Sp, Su	
	Total		12			

Engineering Courses unique to B.S. in Software Engineering	60

General Education & Other Required Courses	60
Total Engineering Credits	60
Total Degree Credits	120

***Special Notes:**

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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 Software Engineering Program