The Bachelor of Science in Software Engineering degree requires a minimum of 120 hours.
43-44 hours of Liberal Arts Core and supporting Courses and
66 hours of Software Engineering coursework (57 hrs required courses, 3 hrs Senior Project, 6hrs Major electives)
Completion of additional credits to reach the 120 minimum credits; that will typically be 8-11 credits.

YEAR ONE		Sem. Hrs.
FALL		
BACS 180	**Introduction to Software Engineering**	1
CS 120	**Computer Programming**	3
MATH 131	(LAC 2) Calculus I	4
ENG 122	(LAC 1a) College Composition	3
	(LAC 3 - Art & Humanities)	3
SPRING		
MATH 132	**(LAC 2) Calculus II**	4
CS 160	**Structured Programming**	3
STAT 150	(LAC 2) Introduction to Statistical Analysis	3
ENG 123 **or** SCI 291	(LAC 1b) College Research Paper **or** (LAC 1b) Scientific Writing	3
	(LAC 5 - Social Science)	3
	Total	30

YEAR TWO		Sem. Hrs.
FALL		
CS 200	**Object-Oriented Design & Programming-FALL ONLY**	3
MATH 228	**Discrete Mathematics**	3
PHYS 220 **or** PHYS 240	(LAC 6L) Introductory Physics I **or** (LAC 6L) General Physics I	5
	(LAC 3 - Art & Humanities)	3
SPRING		
BACS 200	**Web Design & Dev. for Small Businesses**	3
BACS 287	**Graphical Interface Programming**	3
CS 301	**Algorithms and Data Structures—SPRING ONLY**	3
BIO 110 **or** CHEM 111	(LAC 6) Principles of Biology **or** (LAC 6) Principles of Chemistry (with Lab)	4 or 5
	(LAC 4 - History)	3
	Total	30/31

YEAR THREE		Sem. Hrs.
FALL		
BACS 380	**Network & Data Comm. Systems**	3
BACS 350	**Intermediate Web Development—FALL ONLY**	3
CS 350	**Software Engineering I—FALL ONLY**	3
MATH 350	**Elementary Probability Theory**	4
	University Wide Elective	2-5
SPRING		
BACS 300	**Information Systems**	3
BACS 385	**Fundamentals of Project Management--SPRING ONLY**	3
	SE Major Elective (3 credits) Choose one course from any 300 or 400 level BACS or CS course not otherwise required for the major.	3
	(LAC 8 - Multicultural Studies)	3
	(LAC 5 - Social Science)	3
	Total	30-33

YEAR FOUR		Sem. Hrs.
FALL		
BACS 485	**Database Management Systems—FALL ONLY**	3
BACS 487	**Systems Analysis & Design—FALL ONLY**	3
BACS 383	**User Interface Design & Development**	3
	University Wide Elective	3
	(LAC 7 – International Studies)	3-5
SPRING		
BACS 488 Or CS 497	**Senior CIS Project--SPRING ONLY** / **Senior Project --SPRING ONLY**	3
CS 440 or CS 442	**Operating Systems or Networking—SPRING ONLY**	3
	University Wide Elective	3
	SE Major Elective (3 credits) Choose one course from any 300 or 400 level BACS or CS course not otherwise required for the major.	3
	Total	27-29

At least 44 credit hours of the degree must be earned at UNC.

A student must attain a 2.0 or greater GPA in the required major and specified LAC courses. Each student must attain at least a "C-" grade in each required major and specified LAC course.

Some courses require having earned a grade of "C" or better in a prerequisite ("C-" is not acceptable). Pay attention to the specific prerequisites on the next page.

UNC's Grade Replacement Policy may be applied to Software Engineering courses during the student's undergraduate academic career. Please see http://www.unco.edu/registrar/grades/grade-replacement.aspx for details.

Note: Some students may qualify to apply for admission to Software Engineering. These students include: Transfer students with at least 15 hours with a cumulative GPA of 2.5-2.99 and UNC students who have completed a total of 15 hours with a cumulative UNC GPA of 2.5-2.99. Students may apply for admission to Software Engineering by contacting the Department of Accounting and CIS in Kepner 2090.

SOFTWARE ENGINEERING COURSE PREREQUISITES: 2020-2021 CATALOG

Students must meet course prerequisites as stated in the current UNC catalog.
Check the catalog each semester you register to make certain you meet requirements.

SOFTWARE ENGINEERING REQUIRED MAJOR: 66 Credits
Take all courses in the following list. A grade of "C-"or better is required in each course required for this major.
No more than 20 of these credits may be transferred in from another institution.
Of the 20 credits, no more than 9 of these credits may be transferred in from other institutions at the 300-/400- level.

Course #	Course Titles	Prerequisites	Prerequisite Course Titles/Notes
CS 120	Computer Programming	None	
CS 160	Structured Programming	None	
CS 200	Object-Oriented Analysis, Design, & Prog.	CS 160	Structured Programming with minimum grade of "C"
CS 301	Algorithms and Data Structures	CS 160	Structured Programming with minimum grade of "C"
CS 350	Software Engineering I	CS 200	Object-Oriented Analysis with minimum grade of "C"
CS 440 **or** CS 442	Operating Systems **or** Networking	CS 301 **or** CS 301	Algorithms and Data Structures with minimum grade of "C" **or** Algorithms and Data Structures with minimum grade of "C"
BACS 180	Introduction to Software Engineering	None	
BACS 200	Web Design & Development for Small Bus.	None	
BACS 287	Graphical Interface Programming	Business Majors/Minors SE Majors only	
BACS 300	Information Systems	BACS 101 **or** CS 101 or CS 120 45 completed credits or above	Business Computing **or** Introduction to Computer Science **or** Computer Programming
BACS 350	Intermediate Web Development	BACS 200	Web Design and Development for Small Business
BACS 380	Networking and Data Communications	Business Major/minor SE Majors only Juniors or above	
BACS 383	Designing User Experiences	BACS 200 BACS 287 **or** CS 200 Junior or above	Web Design and Development with minimum grade of "C-" Graphical Interface Programming **OR** Object-Oriented Analysis, Design and Programming with a minimum grade of "C-"
BACS 385	Fundamentals of Project Management	Juniors or above	
BACS 485	Database Management Systems	BACS 287 BACS 300 Business Majors/Minors SE Majors only Senior Standing	Graphical Interface Programming Information Systems
BACS 487	Systems Analysis & Design	BACS 287 BACS 300 CIS Major, CIS Minors & SE Majors only Seniors Standing	Graphical Interface Programming Information Systems
MATH 132	Calculus II	MATH 131	Calculus I with minimum grade of "C"
MATH 228	Discrete Mathematics	MATH 131	Calculus I with minimum grade of "C"
MATH 350	Elementary Probability Theory	MATH 132	Calculus II (can be taken concurrently)
BACS 488 **or** CS 497	Senior CIS Project **or** Senior Project	BACS 387 **or** CS 350 BACS 487 Business Majors/Minors SE Majors Senior Standing / Senior Standing	Object Oriented System Development **or** Software Engineering I with minimum grade of "C-" **and** Systems Analysis and Design with minimum grade of "C-" / *Must complete 3 credit hours*

Software Engineering Major Electives – 6 Credit hours
Choose six (6) credits or more from any 300 or 400 level BACS or CS course not otherwise required for the major.