COMPUTER SCIENCE, SOFTWARE ENGINEERING, MAJOR

Liberal Arts (Code 170-205)

University Requirements

Code	Title	Credits
GRADUATION REQUIREMENTS FOR BACCALAUREATE DEGREE		
Credit Requirements		
Minimum total for graduation [1]		120
Upper division credits (courses numbered 300 and higher)		39
Liberal Education Core		36
Academic Concentrations		
Grade Point Requirements [2]		
Total		2.00 average
Resident		2.00 average
Major		2.00 average
Minor		2.00 average
Certificate		2.00 average
University Residency Requirements [3]		
Minimum total		30
Senior year		23
Major, Standard, upper division in residence		12
Major, Comprehensive, upper division in residence		21
Certificate		25 percent of credits
Procedures Required for Graduation		
Obtain admission to the degree program and/or the College offering it.		
Apply for graduation on CampS.		

1. Certain programs exceed this minimum.
2. See special requirements in each College.
3. See special requirements for the College of Education and Human Sciences.

Liberal Education Core

The University of Wisconsin-Eau Claire measures learning outcomes to ensure that its graduates have achieved a liberal education and prepared themselves to contribute to a complex society. Upon graduation, each undergraduate will have met the four learning goals of our liberal education core and the 11 learning outcomes they comprise.

Code	Title	Credits
LIBERAL EDUCATION CORE REQUIREMENTS		a minimum of 36 credits
Knowledge Goal		
Knowledge Outcome 1 (K1): Natural Sciences		Two (2) learning experiences
One experience in laboratory science must be selected from either K1 or K2.		
Knowledge Outcome 2 (K2): Social Sciences		Two (2) learning experiences
One experience in laboratory science must be selected from either K1 or K2.		
Knowledge Outcome 3 (K3): Humanities		Two (2) learning experiences
Knowledge Outcome 4 (K4): Fine Arts		One (1) learning experience
Skills Goal		
Skills Outcome 1 (S1): Written and Oral Communication		Two (2) learning experiences
One S1 must meet the University Writing Requirement		
Skills Outcome 2 (S2): Mathematics		One (1) learning experience
One S2 to meet the University Mathematics Requirement		
Skills Outcome 3 (S3): Creativity		One (1) learning experiences
Responsibility Goal		
Responsibility Outcome 1 (R1): Equity, Diversity, and Inclusivity		Two (2) learning experiences
One R1 must satisfy Design for Diversity		
Responsibility Outcome 2 (R2): Global Perspectives		One (1) learning experiences
Responsibility Outcome 3 (R3): Civic and Environmental Issues		One (1) learning experiences
Integration Goal		
Integration Outcome 1 (I1): Integration		Two (2) learning experiences
Service-Learning Goal		
Service-Learning		30 hours

College Degree Requirements

Bachelor of Arts or Bachelor of Science Degree (B.A./B.S.)

University Graduation Requirements. All candidates for degrees must fulfill the requirements for credits, curriculum, GPA, and University residency as specified in the section of this catalog titled University Graduation Requirements.

College Graduation Requirements: Grade Point Averages. All candidates for degrees in the College of Arts and Sciences must earn minimum resident and total GPAs of 2.00 in the major, the minor, and the certificate. The resident and total GPAs for the major are computed using all attempted credits applicable to the major including those offered by departments other than the major department. The resident and total GPAs for the minor and the certificate are computed similarly.

Major-Minor and Major-Certificate Requirements. A standard major (a minimum of 36 credits) must be supplemented by a minor (a minimum of 24 credits) or by a certificate (12 to 18 credits) to meet graduation requirements for completing a first and second degree program. No minor or certificate is required with a Comprehensive Major (60 or more credits) or with two majors of 36 or more credits each.

Certain degree programs which include Comprehensive Majors may require more than the minimum of 120 credits for graduation.

Acceptable academic program combinations are determined at the college level. A major and a minor or a major and certificate or two majors (if available) may not be elected in the same department or program, except in the approved combinations listed here.

College Credits. Earn at least 90 credits in courses offered by the College of Arts and Sciences.

Bachelor of Arts Degree in the College of Arts and Sciences (B.A.)

Fulfillment of all University Graduation Requirements (which includes the Liberal Education Core); all College-level degree requirements (major and minor/certificate emphases, GPAs, earning at least 90 credits in Arts and Sciences course work); foreign language competency at the 102 level. Foreign language competency may be met in one of two ways: (1) Achieve a score on the foreign language placement test that qualifies the student to enter the 201-level course in a foreign language. (2) Earn a grade of at least C (not C-) or a mark of S in a 102-level foreign language course (or AIS 112 or AIS 122 / LANG 122 or CSD 103).

Bachelor of Science Degree in the College of Arts and Sciences (B.S.)

Fulfillment of all University Graduation Requirements (which includes the Liberal Education Core); all College-level degree requirements (major and minor/certificate emphases, GPAs, earning at least 90 credits in Arts and Sciences course work); mathematics competency at the MATH 111, MATH 112 or MATH 113 level. Mathematics competency can be met in one of three ways: (1) Achieve a score on the mathematics placement test that qualifies the student to enter MATH 114. (2) Earn a grade of at least C (not C-) or a mark of S in MATH 111, MATH 112, or MATH 113. (3) Achieve a satisfactory score on the MATH 112 competency test. This test may be attempted no more than two times.

Major Requirements

This major is recommended for students who desire a strong foundation in software design and development.

A minimum of 42 semester credits, including:

Software Engineering Core (39 crs)		
CS 145	Programming for New Programmers	4
or CS 148	Programming for Experienced Programmers	
CS 146	The Big Picture in Computer Science	1
CS 245	Advanced Programming and Data Structures	4
CS 252	Computer Systems	4
CS 260	Database Systems	4
CS 268	Web Systems	3
CS 330	Programming Languages	3
CS 335	Algorithms	3
CS 352	Computer Architecture	3
CS 355	Software Engineering I	3
CS 396	Junior Seminar	1
CS 452	Operating Systems	3
CS 485	Software Engineering II (capstone course)	3
A Computer Science elective, selected from one of the following options:		
Option 1		
Select a minimum of three credits of electives chosen from the following Computer Science courses not already included in the Software Engineering core:		
CS 278	Digital System Design	
CS 291	Special Topics	
CS 321	Web Design and Development	
CS 322	Animation Programming	
CS 370	Computer Security	
CS 376	Cryptography and Network Security	
CS 388	UNIX Systems Programming	
CS 399	Independent Study - Juniors	
CS 420	Artificial Intelligence	
CS 436	Mobile Software Development	
CS 450	Theory of Computation	
CS 455	Computer Graphics	
CS 462	Computer Networks	
CS 491	Special Topics	
CS 498	Computer Science Internship	
Or other courses designated by the department (three-four credits; recommended for students considering industry employment)		
Option 2		
Six credits from: [1]		
CS 482	Research in Computer Science I	
CS 492	Research in Computer Science II	

[1] additional capstone and research experience; recommended for students considering graduate school

NOTE 1: MATH 114 or equivalent is required.

NOTE 2: MATH 314 or equivalent is required.

NOTE 3: CJ 202, ENGL 312, or ENGL 313 must be completed for a degree in Computer Science, Software Engineering.