

Dual Degree Program in Computer Science and Engineering

Major requirements

Students with a computer science major who also are interested in engineering are able to receive both a Bachelor of Science degree (computer science major) from UW-La Crosse and a Bachelor of Science degree (engineering major) from UW-Madison. At UW-La Crosse, students must complete a minimum of 86 credits, including the general education requirements and specific math and science courses in preparation for the engineering program. Students are recommended to include the following courses in their work at UW-La Crosse:

Code	Title	Credits
CHM 103	General Chemistry I	5
CS 120	Software Design I	4
CS 220	Software Design II	4
CS 224	Introduction to Programming Language	1-3
CS 225	Discrete Computational Structures ¹	3
CS 270	Introduction to Assembler Programming, C Programming and Computer Organization	3
CS 340	Software Design III: Abstract Data Types	4
CS 370	Computer Architecture	3
CS 421	Programming Language Concepts	3
CS 440	Software Design IV: Software Engineering	3
CS 441	Operating System Concepts	3
CS 442	Structures of Compilers	3
ECO 110	Microeconomics and Public Policy	3
ECO 120	Global Macroeconomics	3
ECO 336	Women in the U.S. Economy	3
MTH 207	Calculus I	4
MTH 208	Calculus II	4
MTH 309	Linear Algebra	4
MTH 371	Numerical Methods	3
PHY 203	General Physics I	4
PHY 204	General Physics II	4
PHY 306	Modern Physics	3
STAT 245	Probability and Statistics	4

¹ may substitute MTH 225 for CS 225.

Students should consult with the computer science department chair for specific course and sequence advising for this agreement.

Students who express interest in the dual degree program will be selected for entrance into the UW-Madison portion of the program based on their GPA in all course work; their GPA in the chemistry, computer science, mathematics, and physics course work required by the program; and the positive recommendation of the UW-La Crosse computer science department chair (or designee). The dual degree engineering agreement with UW-Madison has additional requirements for eligibility, including Wisconsin resident status and that students

must have enrolled in UW-La Crosse from high school (rather than transferring to UWL). Admission to UW-Madison is not guaranteed.

In order to receive the B.S. degree from UW-La Crosse, students must also complete credits (to total a minimum of 120 credits) in engineering at UW-Madison and transfer these credits to UW-La Crosse. For the typical student, the remaining credits must include at least eight credits at the 300 level or above. This transfer of credits and awarding of the B.S. degree by UWL can take place as soon as the student earns the necessary credits.

Degree requirements

All students must complete the general education, college core, major/minor, and university degree requirements in order to qualify for a degree. The easiest way to track all of these requirements is to refer to the Advisement Report (AR) found in the Student Information System (WINGS) Student Center. All enrolled students have access to the AR.

- General education (<https://catalog.uwlax.edu/undergraduate/generaleducation/>)
- College core (p. 1)
- Baccalaureate degree requirements (p. 2)

College of Science and Health (CSH) Bachelor of Science core requirements

B.S. and B.A. students graduating from the College of Science & Health are required to take:

- two MTH/STAT courses or one MTH/STAT course and one CS course from the General Education: Quantitative Reasoning Category (GEN ED 1004); and
- two courses selected from the General Education: Experiential Science Category (GEN ED 1008) and/or from BIO 203, BIO 304, BIO 210, CHM 104, GEO 221, GEO 222, PHY 104 or PHY 204. One of the two courses must be from a department outside of the student's major department.

Notes: Mathematics courses can be pairs, i.e. MTH 150 and MTH 151.

For the Bachelor of Science degree, in addition to all other College of Science and Health core requirements, students from non-exempted programs¹ must complete one of the following options. It is recommended that courses are selected in consultation with students' academic advisor.

1. Complete a second major; or
2. Complete a minor outside the major; or
3. Complete two certificates outside the major with at least 12 combined credits at the 300/400 level; or
4. Complete an individualized option, consisting of 18 credits
 - a. At least 12 credits must be earned at the 300/400 level outside the major department.
 - b. The remaining six credits should come from
 - i. 100 level or higher courses outside the major (General education courses may apply provided they are not being used to fulfill minimum general education requirements.); or

- ii. 300/400 level courses inside major not being used to fulfill major requirements.
- c. Internship credits may not count toward the individualized option.

¹ The list of exempted CSH programs is below.

Baccalaureate degree requirements

Candidates for the Bachelor of Arts or the Bachelor of Science degrees must accomplish the following:

1. Fulfill the general education requirements.
2. Complete at least one ethnic studies (diversity) course.
3. Complete the courses prescribed by the Undergraduate Curriculum Committee for the degree desired in the respective school or college.
4. Earn a minimum of 120 semester credits with at least a 2.00 cumulative GPA.^{1,2}
5. At least 40 credits must be earned in 300/400 level courses. Transfer courses earned or transferred at the 300/400 level apply to this requirement.
6. Complete major and minor requirements with at least a 2.00 GPA^{1,2} in each major and minor (and concentration or emphasis, if selected).
7. A minimum of 30 semester credits in residence at UWL is required for graduation. (See undergraduate resident requirement (<https://catalog.uwlax.edu/undergraduate/academicpolicies/graduation/#undergraduate-residence-requirement>)).
8. Submit an application for graduation via the "Submit Intent to Graduate" link in the WINGS Student Center as soon as the student has registered for his or her final semester or summer term in residence. December and winter intersession graduates should apply by May 1. May and summer graduates should apply by December 1.

¹ Grade point average requirements for some programs will be considerably higher than 2.00. Re-entering students may be required to earn credits in excess of the 120 needed for graduation in any curriculum in order to replace credits earned in courses in which the content has changed substantially in recent years. Each case will be judged on its own merit.

² The grade point average recorded at the time the degree is awarded will not be affected by future enrollment.

No degree will be awarded unless all requirements are fulfilled and recorded within 30 days after the official ending date of each term.

Sample degree plan

Below is a sample degree plan that can be used as a guide to identify courses required to fulfill the major and other requirements needed for degree completion. A student's actual degree plan may differ depending on the course of study selected (second major, minor, etc.). Also, this sample plan assumes readiness for each course and/or major plan, and some courses may not be offered every term. Review the course descriptions or the class timetable (<http://www.uwlax.edu/records/registration/>) for course offering information.

The sample degree plans represented in this catalog are intended for first-year students entering UWL in the fall term. Students should use the Advisement Report (AR) in WINGS (<https://wings.uwlax.edu>) and

work closely with their faculty advisor(s) and college dean's office to ensure declaration and completion of all requirements in a timely manner.

General Education Program

The general education curriculum (Gen Ed) is the common educational experience for all undergraduates at UWL. Sample degree plans include Gen Ed placeholders to ensure completion of the general education requirements. Courses may be rearranged to fit the needs or recommendations of the student's program of study. Gen Ed courses may be taken during winter term (January between the semesters) and summer to reduce the course load during regular terms (fall and spring). Students should consult with their advisor and/or the college academic services director in their college/school for assistance with course and schedule planning. Refer to the general education requirements (<https://catalog.uwlax.edu/undergraduate/generaleducation/>) for more specific details.

At least 40 credits of the 120 credits required must be earned at the 300/400-level.

Note: New students and transfer students with less than 12 credits earned are required to take FYS 100 First-Year Seminar (3 cr.) during one of their first two semesters at UWL.

This sample degree plan does not establish a contractual agreement. It identifies the minimum requirements a student must successfully complete, to qualify for a degree, in a format intended to assist the student in planning their academic career. Actual degree plans may differ.

Year 1		
Fall	Credits Spring	Credits
CS 120 (Gen Ed 1004 Quantitative Reasoning)	4 CS 220	4
MTH 207 (CSH Core)	4 CS 225	3
ENG 110 (Gen Ed 1002 Written Literacy)	3 CST 110 (Gen Ed 1003 Spoken Literacy)	3
FYS 100 (Gen Ed 1001 First-Year Seminar)	3 MTH 208	4
Gen Ed 1007 Arts and Aesthetics	2 ECO 110 (Gen Ed 1009 Social and Behavioral Studies)	3
Gen Ed 1013 Cultures of Our World	3	
	19	17

Year 2		
Fall	Credits Spring	Credits
CS 270	3 CS 370	3
CS 340	4 PHY 204	4
MTH 309	4 CS 224	3
PHY 203 (CSH Core (Gen Ed Experiential Science))	4 STAT 245	4
HPR 105 (Gen Ed 1006 Mind and Body)	3 Gen Ed 1007 Arts and Aesthetics	2
	Gen Ed 1012 Planet That Sustains Us	3
	18	19

Year 3		
Fall	Credits Spring	Credits
CS 440	3 CS 442	3
CS 441	3 CS 421	3
ECO 336 (Gen Ed 1005 Ethnic Diversity)	3 MTH 371 (or CS elective)	3
CHM 103 (Gen Ed 1008 Experiential Science)	5 ECO 120	3

Gen Ed 1010 Stories We Tell	3 PHY 306	3
Gen Ed 1011 Past That Define Us	3 Complete CS major field test ¹	
	20	15
Year 4		
Fall	Credits	
Transfer to Engineering Program to complete requirements.		
	0	
Total Credits: 108		

¹ Every student must complete the computer science major field test during their final year on campus. This test is used for program assessment, not individual assessment.