

# Computer Science Major - Computer Engineering Technology Emphasis - Bachelor of Science (BS)

## Major requirements

(All colleges, excluding teacher certification programs)

Students must have completed the Associate in Applied Science degree requirements for electronic and computer engineering technology at Western Technical College (Western) with a GPA of 3.0 or above.

42 credits (51 credits including MTH requirements)

Code	Title	Credits
Select one of the following:		4
CS 120	Software Design I or both CS1-Java I (Western-152 153) & Java 2 (Western-152 155)	
CS 220	Software Design II	4
CS 225	Discrete Computational Structures <sup>1</sup>	3
CS 270	Introduction to Assembler Programming, C Programming and Computer Organization	3
CS 340	Software Design III: Abstract Data Types	4
CS 341	Software Design IV: Software Engineering	3
CS 370	Computer Architecture	3
CS 441	Operating System Concepts	3
Select two of the following:		6
CS 421	Programming Language Concepts	
CS 442	Structures of Compilers	
CS 455	Fundamentals of Information Security	
CS 471	Computer Networks	
Computer science electives <sup>2</sup>		9
<b>Total Credits</b>		<b>42</b>

<sup>1</sup> may substitute MTH 225 for CS 225.

<sup>2</sup> The following courses may be used as alternatives to computer science electives: CPE 105, CPE 212, CPE 309, CPE 406, CPE 419, CPE 420, CPE 463, CPE 466, CPE 478, CPE 499, PHY 335, MTH 317, MTH 371.

The 42 credits must include no less than 25 credits of 300/400 level courses or CS 202 and no less than 22 credits of 300/400 level courses. The combination of Digital Electronic Concepts (Western-662 137), Electronic Devices (Western-662 125) and Embedded Systems (Western-662 134) may be completed at Western in place of CS 272.

In addition, MTH 207 and MTH 208 must be taken.

Students completing this program are not subject to the College of Science and Health requirement for an academic minor or 18 credits of course work at the 300/400 level in courses outside the major.

Every student must complete the computer science major field test. This test is used for program assessment not individual assessment.

## 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 (<http://catalog.uwla.edu/undergraduate/generaleducation/>)
- Baccalaureate degree requirements (p. 1)

## 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. <sup>1,2</sup>
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 <sup>1,2</sup> 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 (<http://catalog.uwla.edu/undergraduate/academicpolicies/graduation/#undergraduate-residence-requirement>)).
8. Submit an application for graduation via the "Apply for Graduation" 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.

<sup>1</sup> 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.

<sup>2</sup> 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

Students in the **Computer Science Major - Computer Engineering Technology Emphasis** begin at Western Technical College and transfer up to 60 credits prior to enrolling at UW-La Crosse. Below is a sample degree plan of the remaining 70 credits to be taken at UWL. This can be used as a guide to identify the courses required to complete the major and other requirements needed for degree completion. The actual degree plan may differ depending on the course of study selected

(second major, minor, etc.). This sample plan also assumes readiness for each course and/or major plan. Some courses may not be offered every term. Review course descriptions or the class timetable for course offering information.

Students should use the Advisement Report (AR) in WINGS (<https://wings.uwlax.edu/psp/csprod/?cmd=login&languageCd=ENG&>) 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 assistant to the dean of their college for assistance with course and schedule planning. Refer to the general education requirements (<http://catalog.uwlax.edu/undergraduate/generaleducation/>) for more specific details.

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

*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 plan their academic career. Actual degree plans may differ.*

**This major is exempt from the CSH College Core requirement.**

Year 1			
Fall	Credits	Spring Credits	
Courses at WTC	15	Courses at WTC	15
	<b>15</b>		<b>15</b>
Year 2			
Fall	Credits	Spring Credits	
Courses at WTC	15	Courses at WTC	15
	<b>15</b>		<b>15</b>
Year 3			
Fall	Credits	Spring Credits	Summer Credits
CS 220	4	CS 340	4 CST 110 (Gen Ed Literacy - Oral) 3
CS 225	3	CS 370	3
CS 270	3	CS 300/400 Elective	3
ECO 120 (Gen Ed Global Studies)	3	ECO 336 (Gen Ed Minority Cultures)	3
Gen Ed Humanistic Studies	3	300/400 Elective	3
	<b>16</b>		<b>16</b>
			<b>3</b>

Year 4				
Fall	Credits	Winter Credits	Spring Credits	Credits
CS 441	3	Gen Ed World Hist	3 CS 300/400 Elective	3
CS 341	3		CS 421, 442, 455, or 471	3
CS 421, 442, 455, or 471	3		CS 300/400 Elective	3
HPR 105 (Gen Ed Health & Well Being)	3		300/400 Elective	3
Gen Ed Arts	2-3		300/400 Elective	1
300/400 Elective	3		Gen Ed Arts	2-3
			Complete CS major field test <sup>1</sup>	
	<b>17</b>		<b>3</b>	<b>15</b>
<b>Total Credits: 130</b>				

<sup>1</sup> Every student must complete the computer science major field test during their senior year. This test is used for program assessment, not individual assessment.