

# COMPUTER SCIENCE, SYSTEMS, BSCS

## Bachelor of Science in Computer Science, Systems (346004BS)

More on the Computer Science, Systems major (<https://www.uakron.edu/computer-science/academics/undergraduate-programs/bscs-system.dot>)

A variant of the Bachelor of Computer Science program allowing customization of the necessary courses.

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

## Requirements Summary

Code	Title	Hours
	General Education Requirements ( <a href="https://bulletin.uakron.edu/undergraduate/general-education/">https://bulletin.uakron.edu/undergraduate/general-education/</a> )	34
	Foreign Language and Upper Level Requirements	14
	Preadmission Major Core Requirements	16
	Computer Science - Systems Core	30-32
	Computer Science - Systems Electives	12
	Additional Credits for Graduation *	14-12
	<b>Total Hours</b>	<b>120</b>

\* Bachelor's degrees require a minimum of 120 credit hours for graduation.

Note: A 2.0 GPA is required in all major coursework.

## General Education Courses

Code	Title	Hours
	Students pursuing a bachelor's degree must complete three tiers of General Education coursework. Tiers I and II provide students with foundational skills and breadth of disciplinary knowledge. Tier III courses require students to integrate knowledge, understand diverse perspectives, and think critically about complex issues. Courses tagged for Tier III may also fulfill major or Disciplinary Area requirements.	

Tier I: Academic Foundations	Hours
<i>Quantitative Reasoning: 3 credit hours</i>	<b>12</b>
<i>Speaking: 3 credit hours</i>	
<i>Writing: 6 credit hours</i>	

Tier II: Disciplinary Areas	Hours
<i>Arts/Humanities: 9 credit hours</i>	<b>22</b>
<i>Natural Sciences: 7 credit hours</i>	
<i>Social Sciences: 6 credit hours</i>	
Tier III: Tagged Courses	
<i>Select one class from each of the following subcategories:</i>	
Complex Systems	
Critical Thinking	
Domestic Diversity	
Global Diversity	
<i>Review the General Education Requirements page for detailed course listings.</i>	

Total Hours 34

## Foreign Language and Upper Level Requirements

Code	Title	Hours
	<b>Degree requirements include the demonstration of ability to use another language by completion of the second year of a foreign language.</b>	<b>14</b>

Foreign Language	
101	Beginning I
102	Beginning II
201	Intermediate I
202	Intermediate II
7700:222	Survey of Deaf Culture in America (American Sign Language option only)

Students must also complete a minimum of 40 credits (excluding workshops) consisting of either:	
	Upper-level (300/400) courses both in and outside of the student's major;
	or other courses outside the major department approved by the student's major department chair (permission should be obtained prior to enrollment); these may not include workshops

## Preadmission Major Core Requirements

Code	Title	Hours
3450:208	Introduction to Discrete Mathematics	4
3460:209	Computer Science I	4
3460:210	Computer Science II	4
3450:221	Analytic Geometry-Calculus I	4
	<b>Total Hours</b>	<b>16</b>

## Computer Science - Systems Core

Code	Title	Hours
3450:222	Analytic Geometry-Calculus II <sup>1</sup>	4
3460:316	Data Structures	3
3460:307	Internet Systems Programming	3
3460:421	Software Design	3
3460:435	Algorithms	3
3460:480	Software Engineering	3
3460:490	Senior Seminar in Computer Science	3
3470:401	Probability and Statistics for Engineers	2-4

or 3470:461	Applied Statistics	
4450:320	Computer Systems	3
4450:325	Operating Systems Concepts	3
or 3460:426	Operating Systems	
Total Hours		30-32

<sup>1</sup> Counts as a College of Arts & Sciences upper level course.

## Computer Science - Systems Electives

Code	Title	Hours
<b>Select a minimum of nine credits of 3460 upper level electives</b>		<b>9</b>
3460:3xx <sup>1</sup>		
3460:4xx <sup>2</sup>		
<b>Select a minimum of six additional credits of approved 300 and/or 400 electives in Computer Science (3460) or related to Computer Science from the following pre-approved list:</b>		<b>6</b>
2440:204	WAN Technologies	
3350:405	Geographic Information Systems	
3350:407	Advanced Geographic Information Systems	
3450:312	Linear Algebra	
3450:410	Advanced Linear Algebra	
3450:415	Combinatorics & Graph Theory	
3450:427	Applied Numerical Methods I	
3450:428	Applied Numerical Methods II	
3450:430	Numerical Solutions for Partial Differential Equations	
3450:436	Mathematical Models	
3470:480	Statistical Data Management	
4450:410	Embedded Scientific Computing	
4450:415	System Simulation	
4450:420	Computer Systems Design	
4450:422	Embedded Systems Interfacing	
4450:427	Computer Networks	
4450:440	Digital Signal Processing	
4450:462	Analog Integrated Circuit Design	
4450:465	Programmable Logic	
4450:467	VLSI Circuits & Systems	
4800:420	Biomedical Signal & Image Processing	
7100:489	Special Topics in Studio Art (ST: Game Design)	
3460:3xx <sup>1</sup>		
3460:4xx <sup>2</sup>		
<i>The following course does not satisfy this requirement:</i>		
3460:406	Introduction to C & UNIX	
Total Hours		15

<sup>1</sup> Only 3 credits of 3460:395 Internship in Computer Science may count toward the Computer Science - Systems Electives.

<sup>2</sup> 3460:489 Topics in Computer Science may be repeated under different topics.