

COMPUTER INFORMATION SYSTEMS, NETWORKING OPTION, BSCIS

Bachelor of Science in Computer Information Systems, Networking (244201BS)

More on the programs in Computer Information Systems, Networking option (<https://www.uakron.edu/computer/networking/>)

Program Description

The Bachelor of Science (BS) in Computer Information Systems (CIS) - Networking degree option allows students to attain in-depth study of network management including building, securing, managing, and troubleshooting multimedia wired and wireless LAN and WAN networks.

The CIS program provides high level training by introducing students to basic computing concepts while allowing them to develop the applied skills required for the workforce. Courses are taught in cutting edge computer labs so students can learn and practice skills. Schedules offer a range of day and evening classes.

Requirements for Admission

- Admission to The University of Akron.
- A cumulative GPA of 2.0 and a minimum of 15 earned credit hours for transfer students.
- Students must pass a *Computer Literacy Placement test* before taking any required Computer Information Systems core courses or take CISS:105 Introduction to Computers and Application Software, which does not count towards degree requirements.
- Students must attain a C or better in each transferred course in the CIS major area.

Program-Specific Degree Requirements

- **Students must attain a C or better in each course in their major area.**
- A cumulative GPA of 2.0 and a minimum of 15 earned credit hours for Inter- and Intra-College Transfer into all Associate and Bachelor degree programs in Computer Information Systems.
- Prior to enrolling in classes for the BS degree you must contact your academic advisor.

Career Information

Graduates of the associate and bachelor's degree programs in Computer Information Systems under the Networking option are expected to qualify for such positions as help-desk support specialists, desktop support analysts, computer operators, PC technicians, network administrators, network specialists, systems administrators, web server administrators and messaging administrators, and information technology (IT) specialists in government, business, information technology, and other industries.

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. Transfer students should consult their Advisor to identify courses that are equivalent.

Three year accelerated option: for first time students who have earned credits for at least the first year of courses. Credits can be earned through qualifying scores on appropriate Advanced Placement (AP) exams or through [College Credit Plus Program \(CCP\)](#) courses. Credits for qualifying AP scores or [CCP](#) courses are determined by the appropriate academic department. Departments may assign varied course credit, depending on the student's score on an AP exam or [grade in a CCP](#) course. Students may also receive credit by examination or via placement tests, where appropriate.

Requirements

Summary

Code	Title	Hours
	General Education Requirements (https://bulletin.uakron.edu/undergraduate/general-education/)	36
	Networking Major Core	62
	Business and Math Courses	23
	Additional Major Electives *	2
Total Hours		123

* This major requires a minimum of 123 completed credit hours.

Recommended General Education Courses

Code	Title	Hours
Students pursuing a bachelor's degree must complete the following General Education coursework. Diversity courses may also fulfill major or Breadth of Knowledge requirements. Integrated and Applied Learning courses may also fulfill requirements in the major.		
Students are not required to enroll in the specific courses listed below. However, to facilitate successful degree completion, the academic department strongly encourages completion of the following recommendations.		
Academic Foundations		12
<i>Mathematics, Statistics and Logic: 3 credit hours</i>		
MATH:152 & MATH:153	Technical Mathematics II and Technical Mathematics III	
MATH:145	Algebra for Calculus	
<i>Speaking: 3 credit hours</i>		
<i>Writing: 6 credit hours</i>		
Breadth of Knowledge		22
<i>Arts/Humanities: 9 credit hours</i>		
<i>Natural Sciences: 7 credit hours</i>		
<i>Social Sciences: 6 credit hours</i>		
ECON:100	Introduction to Economics	
Diversity		
Domestic Diversity		

Global Diversity	
Integrated and Applied Learning	2
<i>Select one class from one of the following subcategories:</i>	
Complex Issues Facing Society	
Capstone	
<i>Review the General Education Requirements page for detailed course listings.</i>	
Total Hours	36

Networking Major Core

Code	Title	Hours
CISS:121	Introduction of Logic/Programming	3
CISS:134	Cybersecurity Fundamentals	3
CISS:141	Web Server Administration	3
CISS:145	Introduction to Unix/Linux	3
CISS:201	Networking Basics ²	3
CISS:202	Router and Routing Basics ¹	3
CISS:204	WAN Technologies ²	3
CISS:240	Computer Information Systems Internship ²	3
CISS:247	Hardware Support	3
CISS:282	Microsoft Networking II ¹	3
CISS:300	Network Authentication and Security ¹	3
CISS:303	Voice, Data, and Video ¹	3
CISS:306	Ethics & Law in Information Technology ²	3
CISS:310	Wireless Networking ¹	3
CISS:388	Advanced UNIX/Linux ²	3
CISS:400	Advanced Routing ²	4
CISS:401	Multilayer Switching ¹	3
CISS:402	Troubleshooting Complex IP-based Networks ²	4
CISS:430	Network Monitoring and Management ¹	3
CISS:490	CIS Senior Networking Projects ²	3
Total Hours		62

Business and Math Courses

Code	Title	Hours
MATH:154	Technical Mathematics IV (or equivalent)	3
MATH:345	Technical Data Analysis	2
COMM:107	Essentials of Management Technology	3
COMM:108	Introduction to Business	3
COMM:202	Elements of Human Resource Management	3
COMM:211	Essentials of Financial Accounting	3
COMM:213	Essentials of Management Accounting	3
or COMM:243	Survey in Finance	
COMM:430	Leading Project Teams	3
Total Hours		23

¹ Traditionally Fall Only (See Program Contact).

² Traditionally Spring Only (See Program Contact).

Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education Mathematics, Statistics, and Logic, Writing First Course, and Speaking requirements.

Note:

- Students entering the Computer Information Systems associate's and bachelor's degree options must pass a *Computer Literacy Placement test* or complete the following bridge course prior to enrolling in the program.
- Bridge Course: CISS:105 Introduction to Computers and Application Software

Recommended Sequence

1st Year

Fall Semester	Hours	
First Writing Course	3	
MATH:152 & MATH:153	Technical Mathematics II and Technical Mathematics III	4
CISS:121	Introduction of Logic/Programming	3
CISS:141	Web Server Administration	3
CISS:247	Hardware Support	3
Hours	16	

Spring Semester

Second Writing Course	3	
COMM:107	Essentials of Management Technology	3
CISS:134	Cybersecurity Fundamentals	3
CISS:145	Introduction to Unix/Linux	3
CISS:201	Networking Basics ²	3
Hours	15	

2nd Year

Fall Semester	Hours	
Speaking Requirement	3	
COMM:108	Introduction to Business	3
COMM:211	Essentials of Financial Accounting	3
CISS:202	Router and Routing Basics ¹	3
CISS:282	Microsoft Networking II ¹	3
Hours	15	

Spring Semester

COMM:202	Elements of Human Resource Management	3
COMM:213 or COMM:243	Essentials of Management Accounting or Survey in Finance	3
CISS:204	WAN Technologies ²	3
CISS:240	Computer Information Systems Internship ²	3
ECON:100	Introduction to Economics ⁴	3
Hours	15	

3rd Year

Fall Semester	Hours	
MATH:154 or MATH:149	Technical Mathematics IV or Precalculus Mathematics	3-4
COMM:430	Leading Project Teams	3
CISS:300	Network Authentication and Security ¹	3
CISS:303	Voice, Data, and Video ¹	3
CISS:310	Wireless Networking ¹	3
Hours	15-16	

Spring Semester

Arts Requirement ³	3
Natural Science Requirement	3

CISS:306	Ethics & Law in Information Technology ²	3
CISS:388	Advanced UNIX/Linux ²	3
CISS:400	Advanced Routing ²	4
Hours		16
4th Year		
Fall Semester		
	Humanities Requirement ³	3
	Natural Science with Lab Requirement	4
MATH:345	Technical Data Analysis	2
CISS:401	Multilayer Switching ¹	3
CISS:430	Network Monitoring and Management ¹	3
Hours		15
Spring Semester		
	Social Science/Domestic Diversity Requirement ³	3
	Arts/Humanities/Global Diversity Requirement ³	3
	Complex Issues Requirement	3
CISS:402	Troubleshooting Complex IP-based Networks ²	4
CISS:490	CIS Senior Networking Projects ²	3
Hours		16
Total Hours		123-124

Program Notes

- ¹ Traditionally Fall Only (See Program Contact).
- ² Traditionally Spring Only (See Program Contact).
- ³ All students pursuing a bachelor's degree at the University of Akron must complete the General Education requirements. For efficient completion of UA General Education requirements, it is recommended that students choose General Education classes that also carry the Global Diversity and Domestic Diversity designation as shown.
- ⁴ Fulfills the Social Science Requirement
- ⁵ MATH:145 Algebra for Calculus may be completed in place of MATH:152 and MATH:153.