

# COMPUTER INFORMATION SYSTEMS, CYBERSECURITY OPTION, BS

## Bachelor of Science in Computer Information Systems, Cybersecurity (244305BS)

More on the Computer Information Systems major (<https://www.uakron.edu/bit/cis/>)

### Program Contacts

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### Program Description

The Computer Information Systems (CIS) offers associate and baccalaureate programs that introduce students to basic computing concepts while allowing them to develop the applied skills required the workforce. Courses start the student along the path for professional certifications. There are options, minors, and certificates available. CIS courses are taught in cutting edge computer labs so students can learn and practice skills. The CIS program offers high level training for the information technology professionals. Schedules offer a range of day and evening classes.

### Department Policy

- Students must attain a "C" or better in each course in their major area (2440).
- Accumulative GPA of 2.0 GPA and a minimum of 15 earned credit hours for Inter- and Intra- College Transfer into all Associate and Bachelor's degree programs.
- Prior to enrolling in classes for the BS degree you must contact an advisor in Polsky 301.

### Career Information

Graduates of the BS CIS – Cybersecurity program are expected to qualify for such positions as law enforcement professionals, computer forensic specialists, data security analysts, systems security administrators, and network security administrators in government, business, information technology, and other industries.

For additional information, please visit the Bureau of Labor Statistics ([www.bls.gov](http://www.bls.gov)) or visit the Career Center in Simmons Hall, Room 301 ([www.uakron.edu/career/](http://www.uakron.edu/career/)).

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. The College of Applied Science and Technology recommends that students take the General Education courses listed in this recommended sequence. Transfer students should consult their Advisor to identify courses that are equivalent.

1st Year		
Fall Semester		Hours
2020:121	English	3
2235:100	Introduction to Digital Forensics	3
2440:145	Introduction to Unix/Linux	3
2440:201	Networking Basics <sup>1,3</sup>	3
2440:202	Router and Routing Basics <sup>1,3</sup>	3
	Hours	15
Spring Semester		
2020:222	Technical Report Writing	3
2030:152	Technical Mathematics II	2
2030:153	Technical Mathematics III	2
2440:121	Introduction of Logic/Programming	3
2440:203	Switching Basics and Wireless <sup>2,3</sup>	3
2440:204	WAN Technologies <sup>2,3</sup>	3
	Hours	16
2nd Year		
Fall Semester		
2040:256	Diversity in American Society	3
2235:280	Cybercrime	3
2420:263	Professional Communications and Presentations	3
2440:247	Hardware Support <sup>1</sup>	3
	Natural Science Requirement	3
	Hours	15
Spring Semester		
2030:216	Applied Finite Mathematics	3
2040:241	Technology & Human Values	3
2235:281	Computer Forensic Methods <sup>2</sup>	3
2440:240	Computer Information Systems Internship <sup>2,4</sup>	3
2440:248	Server Hardware Support <sup>2</sup>	3
	Hours	15
3rd Year		
Fall Semester		
2030:361	Applied Cryptography	3
2235:283	Cyber Warfare	3
2235:381	Computer Forensic Methods II	3
2440:340	Network Forensics I <sup>1</sup>	3
	Humanities Requirement <sup>5</sup>	3
	Hours	15
Spring Semester		
2235:383	Ethical Hacking <sup>2</sup>	3
2440:331	Programming for Cybersecurity <sup>2</sup>	3
2440:388	Advanced UNIX/Linux <sup>2</sup>	3
2440:443	Network Forensics II <sup>2</sup>	3

Natural Science Requirement with Lab		4
Hours		16
<b>Summer Semester</b>		
Co-op <sup>4</sup>		0
Hours		0
<b>4th Year</b>		
<b>Fall Semester</b>		
2235:382	File System Analysis <sup>1</sup>	3
2440:300	Network Authentication and Security <sup>1</sup>	3
2440:431	UNIX-based Systems Security <sup>1</sup>	3
2440:442	Wireless Forensics <sup>1</sup>	3
Arts Requirement <sup>5</sup>		3
Hours		15
<b>Spring Semester</b>		
2030:461	Applied Cryptanalysis	3
2040:243	Contemporary Global Issues	3
2440:440	Intrusion Detection <sup>2</sup>	3
2440:490	CIS Senior Networking Projects <sup>2</sup>	3
Arts or Humanities Requirement <sup>5</sup>		3
Hours		15
Total Hours		122

- Bridge Course: 2440:105 Introduction to Computers and Application Software

<sup>1</sup> Traditionally Fall Only (See Program Contact).

<sup>2</sup> Traditionally Spring Only (See Program Contact).

<sup>3</sup> Course is a 7.5 week course.

<sup>4</sup> Eligible students will be involved in a paid co-op experience during the summer semester of the third year of the program. Co-op positions will enhance the cybersecurity skills of students and provide them with relevant and practical work experience in the cybersecurity industry. Students must have a cumulative GPA of 3.0 or higher in their 2440, 2235, and 2030 courses at the end of the 2nd Year Fall semester and must maintain a GPA of 3.0 or higher through 3rd Year Spring semester to be eligible for the Co-op.

- This paid co-op experience course will be offered as a special section of 2440:240 CIS Internship for those who qualify.
- Those students who have a cumulative GPA under 3.0 must complete a standard section of 2440:240 Computer Information Systems Internship. This will also include those who did not maintain a cumulative GPA of 3.0 or higher from the 2nd Year Fall semester through the 3rd Year Spring semester.

<sup>5</sup> 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 an Arts or Humanities course to fulfill the Global Diversity tag for CIS bachelor's programs.

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.**

**Note:**

- Students entering the Computer Information Systems programs (Cybersecurity, Digital Forensics, Networking, and Programming) must pass department placement exams or complete the following bridge course prior to enrolling in the program.