

# INFORMATION TECHNOLOGY AND NETWORKING COMPREHENSIVE, BACHELOR OF SCIENCE

Offered by Department of Cyber Systems (<http://catalog.unk.edu/undergraduate/departments-programs/cyber-systems/>)

All College of Business and Technology Graduation Requirements (<http://catalog.unk.edu/undergraduate/departments-programs/cyber-systems/>) must be fulfilled.

Code	Title	Credit Hours
<b>General Education</b>		
<i>Foundational Requirements (LOPERs 1-4)</i>		12
Including:		
LOPER 4: Mathematics, Statistics and Quantitative Reasoning		
CYBR 101	Computer Science I: Python for Analytics	
<i>Broad Knowledge Requirements (LOPERs 5-8)</i>		12
Including:		
LOPER 7: Social Science		
CJUS 101	Introduction to Criminal Justice	
<i>Dispositional Requirements (LOPERs 9-10)</i> <sup>1</sup>		6
<i>Wellness (LOPER 11) Optional</i>		0
<b>BS Science-related course requirements</b>		
<b>Major Option</b>		
Complete all required courses		46
<b>Unrestricted electives</b>		
Needed to reach 120 credit hour minimum		44
Total Credit Hours		120

## Major Option

Code	Title	Credit Hours
<b>Information Technology and Networking Core Requirements</b>		
CYBR 105	Cyber Systems Freshmen: Professional Practice	2
CYBR 151	Cyber Programming Environment: Linux	1
CYBR 158	Introduction to Information Security	3
CYBR 325	Database Systems	3
CYBR 335	Fundamentals of Networking & Systems	3
CYBR 340	Information Networking Preceptorial	3
CYBR 348	Systems Administration I	3
CYBR 404	Systems and Software Engineering	3
CYBR 490	Information Networking Law and Public Policy	3
CYBR 495	Cyber Systems Capstone	3
<b>Program Electives</b>		<b>18</b>
CYBR 150	Computer Science II: Object Oriented Programming	

CYBR 180	Discrete Structures
CYBR 305	Healthcare Informatics & Technology
CYBR 345	Intricacies of Advanced Networks & Systems
CYBR 405	Interactive Web Application Development
CYBR 412	Fundamentals and Security of Mobile Networks
CYBR 430	Defending & Protecting Cyber Systems
CYBR 435	Reverse Engineering: Thinking like an Adversary
CYBR 448	System Administration II
CYBR 460	Cloud Computing and Virtualization
CYBR 475	Internship in Cyber Systems <sup>2</sup>
CYBR 478	Cybersecurity for Managers & Leaders
CYBR 479	Cyber Risk and Threat Modeling
CYBR 493	Social Dynamics of Cybercrime
ITEC 220	Electricity/Electronics
JMC 265	Video Production
JMC 300	Website Design
JMC 304	Interactive Media Design
JMC 365	Professional Video
JMC 401	Web Site Design II
JMC 402	CMS - WordPress
JMC 427	Advanced Video Production

Total Credit Hours 45

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Designated courses with the appropriate content may be approved to satisfy one of the Broad Knowledge requirements plus LOPER 9 or Broad Knowledge plus LOPER 10. Courses may be approved to satisfy LOPER 9 or LOPER 10 alone. (Courses satisfying LOPER 9 or LOPER 10 alone must be 3 credit hours.) Students applying this option will need to take additional hours in other categories to meet the required General Education hours.

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Students are encouraged to take CYBR 475.

This document represents a sample 4-year plan for degree completion with this major. Actual course selection and sequence may vary and should be discussed individually with your academic advisor. Advisors can also help you plan other experiences to enrich your undergraduate education such as internships, education abroad, undergraduate research, learning communities, and service learning and community-based learning.

Code	Title	Credit Hours
<b>Semester 1</b>		
MATH 101	Intermediate Algebra (or higher)	4
CYBR 101	Computer Science I: Python for Analytics	3
CYBR 105	Cyber Systems Freshmen: Professional Practice	2
CYBR 151	Cyber Programming Environment: Linux	1
LOPER 1:	First-year Seminar	3

Unrestricted Elective	3
<b>Total Credit Hours</b>	<b>16</b>

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
<b>Semester 2</b>		
CYBR 158	Introduction to Information Security	3
LOPER 2: Writing Skills		3
Unrestricted Elective		3
Unrestricted Elective		3
Unrestricted Elective		3
<b>Total Credit Hours</b>		<b>15</b>

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
<b>Semester 3</b>		
CYBR 335	Fundamentals of Networking & Systems	3
LOPER 3: Oral Communication Skills		3
LOPER 9: Civic Competency and Engagement		3
Unrestricted Elective		3
Unrestricted Elective		3
<b>Total Credit Hours</b>		<b>15</b>

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
<b>Semester 4</b>		
CYBR 340	Information Networking Preceptorial	3
CYBR 325	Database Systems	3
LOPER 5: Visual or Performing Arts		3
Major Elective		3
Unrestricted Elective		3
<b>Total Credit Hours</b>		<b>15</b>

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
<b>Semester 5</b>		
CYBR 348	Systems Administration I	3
Major Elective		3
LOPER 6: Humanities		3
Unrestricted Elective		3
Unrestricted Elective		3
<b>Total Credit Hours</b>		<b>15</b>

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
<b>Semester 6</b>		
CYBR 404	Systems and Software Engineering	3
Unrestricted Elective		3
Unrestricted Elective		3
Major Elective		3
CJUS 101	Introduction to Criminal Justice (LOPER 7)	3
<b>Total Credit Hours</b>		<b>15</b>

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
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<b>Semester 7</b>		
CYBR 490	Information Networking Law and Public Policy	3
LOPER 8: Natural Science		3
Major Elective		3
Major Elective		3
Unrestricted Elective		3
<b>Total Credit Hours</b>		<b>15</b>

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
<b>Semester 8</b>		
CYBR 495	Cyber Systems Capstone	3
Major Elective		3
LOPER 10: Respect for Human Diversity		3
Unrestricted Elective		3
Unrestricted Elective		2
<b>Total Credit Hours</b>		<b>14</b>