



**KENTUCKY STATE  
UNIVERSITY**

# BACHELOR OF SCIENCE IN CYBERSECURITY

Mathematical facts, procedures, skills, and processes are indispensable in acquiring understanding within all fields of science and central to the development and practice of critical thought and communication. Computer science packages these essentials into program courses at Kentucky State University which integrate theoretical as well as practical topics to provide students with the advanced conceptual framework and technical expertise required to succeed in new and ever-changing markets.

Computer Science offers an Online Bachelor of Science program in Cybersecurity. Students will learn skills in programming, systems, networking and all things relative to Cybersecurity. The baccalaureate degree program in computer science is modeled in accordance with guidelines established by the Accreditation Board for Engineering and Technology (ABET).

## Bachelor of Science in Cybersecurity

Computer Science offers the following options as Bachelor of Science majors:

Course	Title	Hours
<b>Year 1</b>		
<b>Term 1 (Fall)</b>		
KSU 118	Intro. to University Learning	3
COS 108	Prin Computer Science I	4
ENG 101	English Comp I	3
MAT 115	College Algebra	3
Natural Science Elective		3
CHE 101	General Chemistry I (must be taken with CHE 110)	
or BIO 101	or Life Science	
or BIO 111	or Principles of Biology	
or CHE 109	or Chemistry in Context	
or CHE 209	or Survey Gen/Organic/Biochemi	
or PHS 201	or Physical Sciences I	
<b>Hours</b>		<b>16</b>
<b>Term 2 (Spring)</b>		
ENG 102	English Comp II	3
COS 109	Prin Computer Sci II	4
COS 170	Networking Fundamentals	3
Arts		3
ART 130	Introduction to Art	
or MUS 130	or Introduction to Music	
or THE 130	or Introduction to Theatre	
or ENG 211	or Intro to Literature	
Social or Behavioral Science Elective		3
FIN 101	Financial Literacy	
or PSY 200	or General Psychology	
or SOC 203	or Principles of Sociology	
or ECO 201	or Prin of Economics I	
<b>Hours</b>		<b>16</b>

### Year 2

#### Term 3 (Fall)

ENG 216	Technical Writing	3
COM 103	Interpersonal Communication	3
COS 281	Introduction to Info. Sec. & A	3
COS 282	Intro to Cryptography	3
COS 310	Discrete Computing Structures	3

**Hours 15**

#### Term 4 (Spring)

COS 200	Computer Information Systems	3
COS 260	Mobile Security	3
Humanities Elective		3

BUA 120	Business and Society
or EDU 204	or Cultural Responsiveness
or HIS 103	or Western Civilization
or HIS 108	or Intro to African American Hist

**Social or Behavioral Elective 3**

SOC 203	Principles of Sociology
or FIN 101	or Financial Literacy
or PSY 200	or General Psychology
or ECO 201	or Prin of Economics I

**Free Elective 3**

**Hours 15**

### Year 3

#### Term 5 (Fall)

COS 300	System Design/Development	3
COS 301	Computer Organization	4
COS 330	Cloud Security	3
Global/Civic		3

AFE 117	Global Perspect Ag/Food/Env
or ASP 303	or American Civil Rights Movement
or POS 361	or World Politics
or POS 101	or American Government

**Guided Elective 3**

**Hours 16**

#### Term 6 (Spring)

COS 302	Operating Systems	3
COS 334	Computer Forensics	4
COS 364	Data Storage and Data Mining	3
COS 410	Database Management Systems	3
Guided Elective		3

**Hours 16**

### Year 4

#### Term 7 (Fall)

COS 332	Management Information Securit	3
COS 460	Artificial Intelligence	3
COS 483	Database Security	3
COS 484	Intro to Network Security	3
Free Elective		2

**Hours 14**

#### Term 8 (Spring)

COS 430	Application Security	3
COS 480	Pene. Test & Vulner. Analysis	3
COS 496	Capstone Project	3
Guided Elective		3

**Hours 12**

**Total Hours 120**