Computer Science Major

Area of Emphasis

Students must complete requirements in one of the following areas of emphasis:

- Artificial Intelligence
- Cybersecurity

Artificial Intelligence

Code	Title	Credits
Supporting Courses (Non-CS classes)		**18**
ENGR 236	Technical Writing and Information Literacy	
MATH 202	Calculus and Analytic Geometry I	
MATH 260	Introductory Statistics	
MATH 320	Linear Algebra and Matrix Theory	
Choose 1 from the following 3 COMM courses		
COMM 133	Fundamentals of Public Address	
or COMM 166	Fundamentals of Interpersonal Communication	
or COMM 237	Small Group Communication	
CS Fundamental Courses		**24**
COMP SCI 120	Web Programming	
COMP SCI 130	Computer Programming I	
COMP SCI 140	Programming for Quantitative Problem Solving	
COMP SCI 171	Technology, Ethics, and Society	
COMP SCI 181	Human-Centered Design	
COMP SCI 221	Database Design & Management	
COMP SCI 240	Discrete Mathematics	
COMP SCI 251	Computer Systems Fundamentals	
CS Advanced Courses		**30**
COMP SCI 330	Computer Programming II	
COMP SCI 348	Computer Networks	
COMP SCI 351	Data Structures	
COMP SCI 353	Computer Architecture and Organization	
COMP SCI 361	Information Assurance and Security	
COMP SCI 362	Artificial Intelligence & Data Science	
COMP SCI 373	Cloud Computing	
COMP SCI 450	Theory of Algorithms	
COMP SCI 452	Operating Systems Using Linux	
COMP SCI 490	Capstone in Computer Science	
Artificial Intelligence & Data Science Emphasis		**12**
Required Courses (choose three):		
COMP SCI 465	Machine Learning	
COMP SCI 466	Deep Learning	
COMP SCI 468	Computer Vision	
COMP SCI 470	Natural Language Processing	
Elective Courses (Choose one):		
COMP SCI 357	Theory of Programming Languages	
COMP SCI 392	Introduction to Mobile Computing	
COMP SCI 421	Parallel & Distributed Computing	
COMP SCI 451	Database Systems and Big Data Processing	
COMP SCI 465	Machine Learning	

Code	Title	Credits
COMP SCI 466	Deep Learning	
COMP SCI 468	Computer Vision	
COMP SCI 470	Natural Language Processing	
COMP SCI 471	Software Security	
COMP SCI 472	Network Security	
COMP SCI 473	Digital Forensics	
COMP SCI 475	Introduction to Cryptography	
COMP SCI 476	Ethical Hacking	
COMP SCI 497	Internship	
Total Credits		**84**

Cybersecurity

Code	Title	Credits
Supporting Courses (Non-CS classes)		**18**
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MATH 202	Calculus and Analytic Geometry I	
MATH 260	Introductory Statistics	
MATH 320	Linear Algebra and Matrix Theory	
Choose 1 from the following 3 COMM courses		
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COMP SCI 221	Database Design & Management	
COMP SCI 240	Discrete Mathematics	
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CS Advanced Courses		**30**
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COMP SCI 348	Computer Networks	
COMP SCI 351	Data Structures	
COMP SCI 353	Computer Architecture and Organization	
COMP SCI 361	Information Assurance and Security	
COMP SCI 362	Artificial Intelligence & Data Science	
COMP SCI 373	Cloud Computing	
COMP SCI 450	Theory of Algorithms	
COMP SCI 452	Operating Systems Using Linux	
COMP SCI 490	Capstone in Computer Science	
Cybersecurity Emphasis		**12**
Required Courses (choose three):		
COMP SCI 471	Software Security	
COMP SCI 472	Network Security	
COMP SCI 473	Digital Forensics	
COMP SCI 475	Introduction to Cryptography	
COMP SCI 476	Ethical Hacking	
Elective Courses (Choose one):		
COMP SCI 357	Theory of Programming Languages	
COMP SCI 392	Introduction to Mobile Computing	

COMP SCI 421	Parallel & Distributed Computing
COMP SCI 451	Database Systems and Big Data Processing
COMP SCI 465	Machine Learning
COMP SCI 466	Deep Learning
COMP SCI 468	Computer Vision
COMP SCI 470	Natural Language Processing
COMP SCI 471	Software Security
COMP SCI 472	Network Security
COMP SCI 473	Digital Forensics
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COMP SCI 476	Ethical Hacking
COMP SCI 497	Internship
Total Credits	**84**