Computer Science Major

Area of Emphasis

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

- Information Assurance and Security
- Software Engineering

Information Assurance and Security

Code	Title	Credits
Supporting Courses (Non-CS classes)		**18**
ENGR 236	Technical Writing	
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		**30**
COMP SCI 201	Introduction to Computing & Internet Technologies	
COMP SCI 203	Introduction to Python Programming	
COMP SCI 207	Programming in C	
COMP SCI 221	Database Design & Management	
COMP SCI 231	Introduction to IT Operations	
COMP SCI 240	Discrete Mathematics	
COMP SCI 253	Digital Logic Fundamentals	
COMP SCI 256	Introduction to Software Design	
COMP SCI 292	Introduction to Mobile Platforms and Apps	
COMP SCI 293	Cloud Computing	
CS Advanced Courses		**24**
COMP SCI 316	Advanced Software Design	
COMP SCI 351	Data Structures	
COMP SCI 353	Computer Architecture and Organization	
COMP SCI 371	Advanced Object-Oriented Design	
COMP SCI 451	Database Systems and Big Data Processing	
COMP SCI 452	Operating Systems Using Linux	
COMP SCI 464	Artificial Intelligence	
COMP SCI 465	Machine Learning	
Information Assurance and Security (IAS) Emphasis Required & Electives Courses		**15**
IAS Required Courses		
COMP SCI 361	Information Assurance and Security	
COMP SCI 471	Software Security	
COMP SCI 490	Capstone Essay in Computer Science	
IAS Elective Course (Choose any two)		
COMP SCI 358	Data Communication and Computer Networks	
COMP SCI 472	Network Security	
COMP SCI 475	Introduction to Cryptography	
COMP SCI 497	Internship	
Total Credits		**87**

Software Engineering

Code	Title	Credits
Supporting Courses (Non-CS classes)		**18**
ENGR 236	Technical Writing	
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		**30**
COMP SCI 201	Introduction to Computing & Internet Technologies	
COMP SCI 203	Introduction to Python Programming	
COMP SCI 207	Programming in C	
COMP SCI 221	Database Design & Management	
COMP SCI 231	Introduction to IT Operations	
COMP SCI 240	Discrete Mathematics	
COMP SCI 253	Digital Logic Fundamentals	
COMP SCI 256	Introduction to Software Design	
COMP SCI 292	Introduction to Mobile Platforms and Apps	
COMP SCI 293	Cloud Computing	
CS Advanced Courses		**24**
COMP SCI 316	Advanced Software Design	
COMP SCI 351	Data Structures	
COMP SCI 353	Computer Architecture and Organization	
COMP SCI 371	Advanced Object-Oriented Design	
COMP SCI 451	Database Systems and Big Data Processing	
COMP SCI 452	Operating Systems Using Linux	
COMP SCI 464	Artificial Intelligence	
COMP SCI 465	Machine Learning	
Software Engineering Emphasis Required & Electives Courses		**15**
Software Engineering Required Courses		
COMP SCI 357	Theory of Programming Languages	
COMP SCI 372	Software Engineering	
COMP SCI 450	Theory of Algorithms	
Software Engineering Elective Course (Choose any two)		
COMP SCI 339	Web Programming	
COMP SCI 340	Numerical Methods for Computer Science	
COMP SCI 368	Compilers	
COMP SCI 497	Internship	
Total Credits		**87**