

CYBERSECURITY - BACHELOR OF SCIENCE

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 120 credits with 48 credits in courses numbered 300/3000 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
General Education		
<i>Area I: Communications</i> ¹		
	English Composition - Level 1 ²	4
	English Composition - Level 2 ²	3
	Oral Communication	3
<i>Area II: Mathematics</i> ³		
Choose one from the following:		3-4
MATH 1430G	Applications of Calculus I	
MATH 1511G	Calculus and Analytic Geometry I	
	or MATH 1511H Calculus and Analytic Geometry I Honors	
<i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i>		11
Area III: Laboratory Sciences Course (8 credits) ²		
Area IV: Social & Behavioral Sciences (3 credits) ²		
<i>Area V: Humanities</i> ²		3
<i>Area VI: Creative and Fine Arts</i> ²		3
<i>General Education Elective</i>		
MATH 1521G	Calculus and Analytic Geometry II	4
	or MATH 1521H Calculus and Analytic Geometry II Honors	
Viewing a Wider World ⁴		6
Departmental/College Requirements		
Choose one sequence from the following:		7-8
CSCI 1720 & CSCI 2210	Computer Science I and Object-Oriented Programming	
CSCI 1210 & CSCI 2210	Java Programming and Object-Oriented Programming	
CSCI 2220	Introduction to Data Structures and Algorithms	4
CSCI 2230	Assembly Language and Machine Organization	4
	or E E 212 Introduction to Computer Organization	
CSCI 2310	Discrete Mathematics for Computer Science	4
CSCI 3710	Software Development	4
CSCI 4110	Computing Ethics and Social Implications of Computing	1
CSCI 4120	Operating Systems I	3
CSCI 4130	Linux System Administration	3
CSCI 4140	Database Management Systems I	3
CSCI 4205	Computer Security	3
CSCI 4206	Hardware Security	3
CSCI 4225	Introduction to Cryptography	3
CSCI 4235	Cellular Networks and Mobile Computing ⁵	3
	or E E 490 Selected Topics	
CSCI 4240	Software Reverse Engineering	3
CSCI 4245	Computer Networks I	3
Choose one from the following:		3
E E 200	Linear Algebra, Probability and Statistics Applications	

STAT 3110	Statistics for Engineers and Scientists	
STAT 4210	Probability: Theory and Applications	
CJUS 412	Introduction to Security Technology and Loss Prevention	3
BCIS 482	Management of Information Security	3
ICT 339	Introduction to Digital Forensics and Incident Response	3
CSCI 4220	Cloud and Edge Computing	3
CSCI 4980	Senior Project	4
Second Language Requirement: (not required)		
Electives, to bring the total credits to 120 ⁶		10
Select upper division electives to bring total upper division to 48		
Total Credits		120-122

- ¹ Students with Area I transfer credits may sometimes complete this requirement with 9 credits
- ² See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) section of the catalog for a full list of courses, excluding CSCI 1115G Modern Computing in Practice
- ³ Either MATH 1511G Calculus and Analytic Geometry I or MATH 1430G Applications of Calculus I are required for the degree but students may need to take any prerequisites needed to enter MATH 1511G or MATH 1521G first.
- ⁴ See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) section of the catalog for a full list of courses.
- ⁵ Can be replaced with E E 490 Selected Topics.
- ⁶ Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study For Students

This roadmap assumes student placement in MATH 1511G Calculus and Analytic Geometry I and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and english. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

First Year		Credits
Semester 1		
ENGL 1110G	Composition I	4
	or ENGL 1110H or Composition I Honors	
Choose one from the following: ¹		3-4
MATH 1511G	Calculus and Analytic Geometry I	
	or MATH 1511H or Calculus and Analytic Geometry I Honors	
MATH 1430G	Applications of Calculus I	
Area III: Laboratory Science Course ²		4
Area IV: Social/Behavioral Sciences Course ²		3
Credits		14-15
Semester 2		
Choose one from the following:		3
COMM 1115G	Introduction to Communication	
COMM 1130G	Public Speaking	

HNRS 2175G	Introduction to Communication Honors	
MATH 1521G or MATH 1521H	Calculus and Analytic Geometry II or Calculus and Analytic Geometry II Honors	4
CSCI 1720	Computer Science I	4
Choose one from the following:		3
ENGL 2130G	Advanced Composition	
ENGL 2210G or ENGL 2210H	Professional and Technical Communication or Professional and Technical Communication	
ENGL 2215G	Advanced Technical and Professional Communication	
Area V: Humanities Course ²		3
Credits		17

Second Year**Semester 1**

Area VI: Creative and Fine Arts Course ²		3
Area III: Laboratory Sciences Course ²		4
CSCI 2210	Object-Oriented Programming	4
CSCI 2220	Introduction to Data Structures and Algorithms	4
Credits		15

Semester 2

VWW ^{3,5}		3
CSCI 2230 or E E 212	Assembly Language and Machine Organization or Introduction to Computer Organization	4
CSCI 2310	Discrete Mathematics for Computer Science	4
Choose one from the following:		3
E E 200	Linear Algebra, Probability and Statistics Applications	
STAT 3110	Statistics for Engineers and Scientists	
STAT 4210	Probability: Theory and Applications	
Credits		14

Third Year**Semester 1**

Viewing a Wider World Course ³		3
CSCI 3710	Software Development	4
BCIS 482	Management of Information Security	3
CSCI 4235	Cellular Networks and Mobile Computing	3
CSCI 4220	Cloud and Edge Computing (Recommended)	3
Credits		16

Semester 2

Viewing a Wider World Course ³		3
CSCI 4205	Computer Security	3
CJUS 412	Introduction to Security Technology and Loss Prevention	3
CSCI 4240	Software Reverse Engineering	3
Elective Course ⁴		3
Credits		15

Fourth Year**Semester 1**

CSCI 4120	Operating Systems I	3
CSCI 4140	Database Management Systems I	3
CSCI 4130	Linux System Administration	3
ICT 339	Introduction to Digital Forensics and Incident Response	3
Elective Course ⁴		3
Credits		15

Semester 2

CSCI 4110	Computing Ethics and Social Implications of Computing	1
CSCI 4206	Hardware Security	3
CSCI 4225	Introduction to Cryptography	3
CSCI 4245	Computer Networks I	3
CSCI 4980	Senior Project	4
Credits		14
Total Credits		120-121

¹ MATH 1511G Calculus and Analytic Geometry I or MATH 1430G Applications of Calculus I is the starting requirement for this degree but students may need to take prerequisites before enrolling.

**If a student tests into MATH 1521G Calculus and Analytic Geometry II then elective credits can replace this requirement in the roadmap.*

² See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) section of the catalog for a full list of courses.

³ See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) section of the catalog for a full list of courses.

⁴ Any course offered by the university. Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

⁵ Students need to fill in one credit to meet the requirement of 15 credit hours.