COMPUTER SCIENCE (CYBERSECURITY) -**BACHELOR OF SCIENCE**

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.

C S 172 Computer Science I 4 C S 271 Object Oriented Programming 4 C S 273 Machine Programming and Organization 4 ENGL 1110G Composition I 4 MATH 1511G Calculus and Analytic Geometry I ¹ 4 MATH 1521G Calculus and Analytic Geometry II 4 Area IV: Social/ Behavioral Sciences Course ² 3 Area V: Humanities Course ² 3 Area V: Humanities Course ² 3 Area V: Humanities Course ² 3 Credits 30 Sophomore C S 272 Introduction to Data Structures 4 C S 278 Discrete Mathematics for Computer Science 4 C S 370 Compilers and Automata Theory 4 C S 372 Data Structures and Algorithms 4 COMM 1115G Introduction to Communication 3 ENGL 2210G Professional and Technical Communication 4 Honors 4 MATH 4230 or Applied Linear Algebra 3 or MATH 4230 or Applied Linear Algebra 3 Select one from the following: 3 Select one from the following: 3 STAT 311 Statistics for Engineers and Scientists 5 STAT 4210 Probability: Theory and Applications 4 Elective credits if needed for financial aid requirements ³ 3 A+ S 371 Software Development 4 C S 471 Programming Language Structure 1 3 Credits 3 MATH elective (upper division) ⁵ 3 Lab Science Elective ⁶ 4 Lab Science Elective ⁶ 4 Lab Science Elective ⁶ 4 Lab Science Elective ⁶ 4 Viewing a Wider World ⁷ 3 Viewing a Wider World ⁷ 3 Senior Credits S Fan Project 4	Freshman		Credits	
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C S 448 Senior Project 4	Senior			
	C S 448	Senior Project	4	

	Total Credits	120-123
	Credits	26
Electives as needed to meet minimum credit requirements 3		
Upper division electives to bring total upper division to 48 3		
Computer Science 400	3	
Lab Science Elective ⁶	4	
C S 474	Operating Systems I	3
C S 419	Computing Ethics and Social Implications of Computing	1

Total Credits

¹ MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter MATH 1511G first.

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

3 Students who plan to graduate with a concentration need to complete the specific requirements for the chosen concentration.

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.

See list of Computer Science electives (p. 1) in Degree Requirement Section.

5 Math Electives:

- MATH 3110 Introduction to Modern Algebra
- · MATH 3120 Introduction to Analysis
- · MATH 3140 Introduction to Numerical Methods
- MATH 3160 Introduction to Ordinary Differential Equations
- MATH 4320 Logic and Set Theory
- MATH 4330 Elementary Number Theory

⁶ See list of Lab Science (p. 1) courses in the Degree Requirement Section.

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

Students planning to undertake graduate work in computer science are encouraged to consult with their advisor regarding the possibility of taking other computer science electives to satisfy their departmental requirements.

or C S 449 or Senior Thesis