

# COMPUTER SCIENCE (SECONDARY EDUCATION) - BACHELOR OF ARTS

## A Suggested Plan of Study For Students

This roadmap assumes student placement in MATH 1220G and ENGL 1110G. 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.

This roadmap adds the MATH 1511G prerequisites into the plan, MATH 1220G and MATH 1250G will not appear on the requirements tab. Any students who test into MATH 1511G Calculus and Analytic Geometry I can supplement MATH 1220G College Algebra and MATH 1250G Trigonometry & Pre-Calculus with elective credits.

Freshman		Credits
CSCI 1110	Computer Science Principles <sup>1</sup>	4
ENGL 1110G or ENGL 1110H	Composition I or Composition I Honors	4
MATH 1220G	College Algebra <sup>2</sup>	3
COMM 1115G or HNRS 2175G	Introduction to Communication or Introduction to Communication Honors	3
CSCI 1720	Computer Science I	4
MATH 1511G or MATH 1430G or MATH 1511H	Calculus and Analytic Geometry I or Applications of Calculus I or Calculus and Analytic Geometry I Honors	4
Area III: Laboratory Science Course <sup>3</sup>		4
Area IV: Social/ Behavioral Sciences Course <sup>3</sup>		3
Electives as needed to meet the minimum credit requirement for financial aid <sup>4</sup>		1-3
<b>Credits</b>		<b>30-32</b>
Sophomore		Credits
CSCI 2210	Object-Oriented Programming	4
CSCI 2220	Introduction to Data Structures and Algorithms	4
CSCI 2230	Assembly Language and Machine Organization	4
CSCI 2310	Discrete Mathematics for Computer Science	4
Area V: Humanities Course <sup>3</sup>		3
ENGL 2210G or ENGL 2210H	Professional and Technical Communication or Professional and Technical Communication	3
EDUC 3120	Multicultural Education	3
SPED 3105	Introduction to Special Education in a Diverse Society	3
Area 6: Create and Fine Arts		3
<b>Credits</b>		<b>31</b>
Junior		Credits
CSCI 3730	Compilers and Automata Theory	4
CSCI 3710	Software Development	4
Either an Area III/IV: Laboratory Science Course or Social/Behavioral Sciences Course <sup>3</sup>		3-4
CSCI elective, List 1/2 <sup>5</sup>		3
CSCI elective, List 1/2 <sup>5</sup>		3
General Education Elective Course <sup>3</sup>		3-4

EDUC 3997	Secondary Field Experience	3
READ 4330	Content Area Literacy <sup>6</sup>	3
Select one from the following:		3
MATH 1350G	Introduction to Statistics	
MATH 2350G	Statistical Methods	
STAT 3110	Statistics for Engineers and Scientists	
STAT 4210	Probability: Theory and Applications	
A ST 311	Statistical Applications	
Electives as needed to meet the minimum credit requirement for financial aid <sup>4</sup>		1

Credits		30-32
Senior		
CSCI 4140	Database Management Systems I	3
CSCI elective, List 1/2 <sup>5</sup>		3
CSCI elective, List 1/2 <sup>5</sup>		3
Viewing a Wider World Course <sup>7</sup>		3
EDUC 4420	Teaching Mathematics at the Middle and High School Level <sup>6</sup>	3
EDUC 4820	Secondary Student Teaching <sup>8</sup>	9
EDUC 4821	Middle and High School Student Teaching Seminar <sup>8</sup>	3
CSCI 4980 or CSCI 4999	Senior Project or Senior Thesis	4
CSCI 4110	Computing Ethics and Social Implications of Computing	1
<b>Credits</b>		<b>32</b>
<b>Total Credits</b>		<b>123-127</b>

<sup>1</sup> Required for students who do not pass MATH 1215 Intermediate Algebra or do not pass the CS placement exam and is not counted towards graduation

<sup>2</sup> MATH 1511G Calculus and Analytic Geometry I is the starting requirement for this degree but students may need to take MATH 1220G College Algebra and MATH 1511G Calculus and Analytic Geometry I before enrolling in it. If a student tests into MATH 1511G Calculus and Analytic Geometry I then elective credits can replace MATH 1220G College Algebra/MATH 1250G Trigonometry & Pre-Calculus in the roadmap.

<sup>3</sup> See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) section of the catalog for a full list of courses.

<sup>4</sup> 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.

<sup>5</sup> For electives see List 1 or List 2 of Computer Science electives (<https://catalogs.nmsu.edu/nmsu/arts-sciences/computer-science/computer-science-bachelor-arts/#requirements-text>) in Degree Requirement Section.

<sup>6</sup> Requires admittance into the Teacher Education Program TEP.

<sup>7</sup> See the Viewing a Wider World (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworld-text>) section of the catalog for a full list of courses.

<sup>8</sup> Requires admittance into Student Teaching STEP.