

# BACHELOR OF SCIENCE (BS) IN COMPUTER SCIENCE AND MASTER OF SCIENCE IN CYBER TECHNOLOGY (MSCT)

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## Program Requirements

Entrance requirements for the Bachelor of Science in Computer Science and Master of Science in Cyber Technology combined degrees are:

- 3.0 GPA
- Junior Standing
- Acceptance into Graduate School

## Freshman – Junior Standing Requirements

Students will complete the course requirements for undergraduate BSCS (<https://catalog.clayton.edu/academic-catalog/information-mathematical-sciences/computer-science-information-technology/computer-science-bs/>).

## Senior Standing Requirements

Students will complete up to 6 credit hours of approved graduate-level CSCI courses in the final 2 semesters along with their remaining undergraduate coursework.

The student must submit the following to Graduate Admissions during their senior year: application, application processing fee, and transcripts from all institutions attended.

## Suggested Course Sequence

Please note: This is a suggested course sequence.

Course	Title	Credit Hours
<b>First Year</b>		
<b>First Semester</b>		
ENGL 1101	English Composition I	3
MATH 1112 or MATH 1113	College Trigonometry or Pre-Calculus	3
POLS 1101	American Government <sup>Core Area E1</sup>	3
HIST 2111 or HIST 2112	Survey of US History to 1877 <sup>Core Area E3</sup> or US HIST Since Reconstruction	3
CSCI 1301	Computer Science I	3
CSU 1000	First Year Seminar	1
<b>Credit Hours</b>		<b>16</b>
<b>Second Semester</b>		
ENGL 1102	English Composition II	3
CRIT 1101	Critical Thinking	3
CSCI 1100	Applied Computing	3
CSCI 1302	Computer Science II	3
MATH 2020	Introductory Discrete Math	3
<b>Credit Hours</b>		<b>15</b>
<b>Second Year</b>		
<b>First Semester</b>		
Foreign Languages or Communication <sup>Area B2</sup>		1

Literature, Philosophy, or Foreign Language <sup>Core Area C1</sup>		3
1st Natural Sciences with Lab <sup>Area D1</sup>		4
MATH 1501	Calculus I	4
CSCI 2302	Data Structures and Algorithms	3
<b>Credit Hours</b>		<b>15</b>
<b>Second Semester</b>		
Fine Arts OR Intermediate Foreign Language <sup>Core Area C2</sup>		3
HIST 1111 or HIST 1112 or HIST 2750 or POLS 2401	Survey-PreModern World History <sup>Core Area E2</sup> or Survey of Modern World History or Critical Trends and Issues or Intro to Global Issues	3
CSCI 2305	Computer Org. & Architecture	3
MATH 1401	Elementary Statistics	3
MATH 2502	Calculus II	4
<b>Credit Hours</b>		<b>16</b>
<b>Third Year</b>		
<b>First Semester</b>		
2nd Natural Sciences with Lab <sup>Core Area D1</sup>		4
MATH 2140	Introductory Linear Algebra	3
CSCI 3305	Operating Systems	3
CSCI 3306	Computer Networks & Security	3
CSCI 3310	Databases Design & Implement.	3
<b>Credit Hours</b>		<b>16</b>
<b>Second Semester</b>		
AFAM 2010 or ECON 1101 or ECON 2105 or ECON 2106 or PSYC 1101 or SOCI 1101 or WST 2010	Intro-African American Studies <sup>Core Area E4</sup> or Economic of Financial Literacy or Principles of Macroeconomics or Principles of Microeconomics or Intro to General Psychology or Introduction to Sociology or Intro to Women's Studies	3
CSCI 3300	Professional Dev and Ethics	3
CSCI 3320	Software Engineering Design	3
CSCI 3333	Programming Languages	3
Area F Course *		4
<b>Credit Hours</b>		<b>16</b>
<b>Total Credit Hours</b>		<b>94</b>

## Cybersecurity Concentration and General Computer Science Concentration

Course	Title	Credit Hours
<b>Fourth Year</b>		
<b>First Semester</b>		
CSCI 4333	Theory of Computation	3
CSCI 4320	Software Engineering Practicum	3
CSCI 5701	Introduction to Cybersecurity <sup>1, 2</sup>	3
Major Concentration		3
ENGL 3900	Professional & Tech. Writing	3
<b>Credit Hours</b>		<b>15</b>
<b>Second Semester</b>		
CSCI 5317	Operating Systems Admin& Secur <sup>2, 3</sup>	3
Major Concentration		3
Major Concentration		3
Free Elective		3
<b>Credit Hours</b>		<b>12</b>
<b>Total Credit Hours</b>		<b>27</b>

## Big Data Concentration

Course	Title	Credit Hours
<b>Fourth Year</b>		
<b>First Semester</b>		
CSCI 4333	Theory of Computation	3
CSCI 4320	Software Engineering Practicum	3
Major Concentration		3
Major Concentration		3
ENGL 3900	Professional & Tech. Writing	3
<b>Credit Hours</b>		<b>15</b>
<b>Second Semester</b>		
Major Concentration		3
Major Concentration		3
Major Concentration		3
CSCI 5701	Introduction to Cybersecurity <sup>1, 2</sup>	3
CSCI 5317	Operating Systems Admin& Secur <sup>3, 4</sup>	3
<b>Credit Hours</b>		<b>15</b>
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup> Students who take CSCI 5701 Introduction to Cybersecurity in their senior year should not take CSCI 4701 or ITMM 4423 Security for E-Commerce.

<sup>2</sup> Dual Credit-Course counts toward both degrees.

<sup>3</sup> Students who take CSCI 5317 Operating Systems Admin& Secur should not take CSCI 4317 OS Security, Prog, & Admin or ITFN 4601 OS Security, Prog, & Admin.

<sup>4</sup> The 3 credit-hours count only toward master's degree.

## Applied Project Track (Fifth Year)

Course	Title	Credit Hours
<b>Fifth Year</b>		
<b>First Semester</b>		
CSCI 5306	Computer & Networks Security	3
CSCI 5601	Software Security	3
Concentration Course		3
CSCI 6574	Research Techniques	3
<b>Credit Hours</b>		<b>12</b>
<b>Second Semester</b>		
CSCI 6599	Special Project	3
Concentration Course		3
Concentration Course		3
Concentration Course		3
<b>Credit Hours</b>		<b>12</b>
<b>Total Credit Hours</b>		<b>24</b>

## Thesis Track (Fifth Year)

Course	Title	Credit Hours
<b>Fifth Year</b>		
<b>First Semester</b>		
CSCI 5306	Computer & Networks Security	3
CSCI 5601	Software Security	3
CSCI 6574	Research Techniques	3
Concentration Course		3
<b>Credit Hours</b>		<b>12</b>
<b>Second Semester</b>		
CSCI 6600	Thesis	3
Concentration Course		3
Concentration Course		3
Concentration Course		3
<b>Credit Hours</b>		<b>12</b>
<b>Total Credit Hours</b>		<b>24</b>

\* MATH 2503 Calculus III OR 3rd Calculus III OR 3rd Natural Sciences with Lab.