BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS) AND MASTER OF SCIENCE IN DATA SCIENCE (MSDS)

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Program Requirements

The Computer Science and Information Technology Department and the School of Graduate Studies offer a combined Bachelor's and Master's degree in which students earn a Bachelor of Science in Computer Science and a Master of Science in Data Science within five-years.

Entrance requirements for BSCS/MSDS degrees are:

- 3.0 GPA
- Acceptance into Graduate School

FRESHMAN – JUNIOR STANDING REQUIREMENTS

Students will complete the course requirements for undergraduate BSCS (see requirements here (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 from MSDS curriculum 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 and assumes a starting freshman with no prior college credit who intends to complete their degree in four years. Students should consult with their academic advisor and review the course prerequisites and minimum grade requirements as seen in the Academic Catalog.

Course	Title	Credit Hours
Freshman		
First Semester		
ENGL 1101	English Composition I	3
MATH 1112 or MATH 1113	College Trigonometry or Pre-Calculus	3
POLS 1101	American Government	3
HIST 2111 or HIST 2112	Survey of US History to 1877 or US HIST Since Reconstruction	3
CSCI 1301	Computer Science I	3
CSU 1000	First Year Seminar	1
	Credit Hours	**16**
Second Semester		
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
	Credit Hours	**15**
Sophomore		
First Semester		
Area B2: Foreign Languages or Communications		1
Area C1: Literature, Philosophy, or Foreign Language		3
Area D1 (Science Majors): 1st Natural Sciences with Lab		4
MATH 1501	Calculus I	4
CSCI 2302	Data Structures and Algorithms	3
	Credit Hours	**15**
Second Semester		
Area C2: Fine Arts OR Intermediate Foreign Language		3
Area E2: World History		3
CSCI 1302	Computer Science II	3
ITFN 2214	Web Application Development	3
ITFN 2512	Interm. Networking & Security	3
	Credit Hours	**15**
Junior		
First Semester		
Area D1: 2nd Natural Sciences with Lab		4
MATH 2140	Introductory Linear Algebra	3
CSCI 3305	Operating Systems	3
CSCI 3306	Computer Networks & Security	3
CSCI 3310	Databases Design & Implement.	3
	Credit Hours	**16**
Second Semester		
Area E4: Social Sciences-One Behavioral Sciences Course		3
CSCI 3300	Professional Dev and Ethics	3
CSCI 3320	Software Engineering Design	3
CSCI 3333	Programming Languages	3
Math 2503 OR 3rd Natural Sciences with Lab		4
	Credit Hours	**16**
	Total Credit Hours	**93**

CYBERSECURITY CONCENTRATION

Course	Title	Credit Hours
Senior		
First Semester		
CSCI 4333	Theory of Computation	3
CSCI 4320	Software Engineering Practicum	3
Major Concentration		3
Major Concentration		3
ENGL 3900	Professional & Tech. Writing	3
	Credit Hours	**15**
Second Semester		
CSCI 5317	Operating Systems Admin& Secur [1, 2]	3
Major Concentration		3
Major Concentration		3
CSCI 5201	Database Theory and Design [2, 3]	3
	Credit Hours	**12**
	Total Credit Hours	**27**

BIG DATA CONCENTRATION

Course	Title	Credit Hours
Senior		
First Semester		
CSCI 4333	Theory of Computation	3

Course	Title	Credit Hours
CSCI 4320	Software Engineering Practicum	3
Major Concentration		3
Major Concentration		3
ENGL 3900	Professional & Tech. Writing	3
Credit Hours		**15**
Second Semester		
CSCI 5201	Database Theory and Design [2, 3]	3
Major Concentration		3
Major Concentration		3
CSCI 5317	Operating Systems Admin& Secur [1, 2]	3
Credit Hours		**12**
Total Credit Hours		**27**

GENERAL CONCENTRATION

Course	Title	Credit Hours
Senior		
First Semester		
CSCI 4333	Theory of Computation	3
CSCI 4320	Software Engineering Practicum	3
Major Concentration		3
Major Concentration		3
ENGL 3900	Professional & Tech. Writing	3
Credit Hours		**15**
Second Semester		
CSCI 5201	Database Theory and Design [2, 3]	3
Major Concentration		3
CSCI 5317	Operating Systems Admin& Secur [1, 2]	3
Free Electives		3
Credit Hours		**12**
Total Credit Hours		**27**

APPLIED PROJECT TRACK

Course	Title	Credit Hours
Fifth Year		
First Semester		
CSCI 5101	Foundations of Information Sys	3
CSCI 5112	System Analysis & Design	3
Concentration Course		3
CSCI 6574	Research Techniques	3
Credit Hours		**12**
Second Semester		
CSCI 6599	Special Project	3
Concentration Course		3
Concentration Course		3
Concentration Course		3
Credit Hours		**12**
Total Credit Hours		**24**

THESIS TRACK

Course	Title	Credit Hours
Fifth Year		
First Semester		
CSCI 5101	Foundations of Information Sys	3
CSCI 5112	System Analysis & Design	3
Concentration Course		3
CSCI 6574	Research Techniques	3
Credit Hours		**12**

Course	Title	Credit Hours
Second Semester		
CSCI 6600	Thesis	3
Concentration Course		3
Concentration Course		3
Concentration Course		3
Credit Hours		**12**
Total Credit Hours		**24**

[1] 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

[2] Dual Credit-Course counts towards both degrees

[3] Students who take CSCI 5201 Database Theory and Design should not take CSCI 4201 Advanced Topics in Databases