BACHELOR OF INFORMATION TECHNOLOGY (BIT) AND MASTER OF SCIENCE IN DATA SCIENCE (MSDS)

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 Information Technology and a Master of Science in Data Science within five-years.

Entrance requirements for BIT/MSDS degrees are:

- 3.0 GPA
- Acceptance into Graduate School

Freshman – Junior Standing Requirements

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

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. Three letters of reference are also required.

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 1101 or MATH 1111	Intro to Mathematical Modeling or College Algebra	3
CRIT 1101	Critical Thinking	3
POLS 1101	American Government	3
ITFN 1101	Foundations-Information Tech.	3
	Credit Hours	**15**
Second Semester		
ENGL 1102	English Composition II	3
MATH 1221	Finite Mathematics	3
HIST 2111 or HIST 2112	Survey of US History to 1877 or US HIST Since Reconstruction	3
ITFN 1201	Foundations of Database Design	3
ITFN 1401	Foundations of Webmaster	3
	Credit Hours	**15**
Sophomore		
First Semester		
Area C1: Literature, Philosophy, or Foreign Language		3
Area E4: Behavioral Science		3
CSCI 1301	Computer Science I	3
MATH 1401	Elementary Statistics	3
ITFN 1502	Fnds. of Networking & Security	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 B2: Foreign Languages or Communication		2
Area D1: Natural Sciences with Lab		4
ITFN 3003	Professional Dev. and Ethics	3
ITFN 3103	Human-Computer Interaction	3
ITFN 3112	System Analysis and Design	3
	Credit Hours	**15**
Second Semester		
Area D1: Natural Sciences		3
ITFN 3144	Informatics Project Management	3
ITFN 3316	SW Security, Testing, and QA	3
ITFN 3601	Operating Systems	3
Free Electives		3
	Credit Hours	**15**
	Total Credit Hours	**90**

Networking and Security Concentration

Course	Title	Credit Hours
Senior		
First Semester		
ITFN 4154	Informatics Integration	3
ITFN 4433	Web Integration	3
ITMM 4423	Security for E-Commerce	3
ITNW 4501	Network Planning and Design	3
CSCI 5317	Operating Systems Admin& Secur [1,2]	3
	Credit Hours	**15**
Second Semester		
ITFN 4014	Internship Cooperative	3
ITNW 4502	Secure Networks & Comm. Protoc	3
CSCI 5201	Database Theory and Design [2,3]	3
Free Electives		3
Free Electives		3
	Credit Hours	**15**
	Total Credit Hours	**30**

Database Administration Concentration

Course	Title	Credit Hours
Senior		
First Semester		
ITFN 4154	Informatics Integration	3
ITFN 4433	Web Integration	3
ITDB 4201	Advanced Database Modeling	3
ITDB 4202	Database Applications	3

Course	Title	Credit Hours
CSCI 5317	Operating Systems Admin& Secur [1,2]	3
	Credit Hours	**15**
Second Semester		
ITFN 4014	Internship Cooperative	3
ITDB 4203	Database Admin & Architecture	3
CSCI 5201	Database Theory and Design [2,3]	3
Free Electives		3
Free Electives		3
	Credit Hours	**15**
	Total Credit Hours	**30**

Course	Title	Credit Hours
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 toward both degrees

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

Informatics Concentration

Course	Title	Credit Hours
Senior		
First Semester		
ITFN 4154	Informatics Integration	3
ITFN 4433	Web Integration	3
Major Concentration		3
Major Concentration		3
CSCI 5317	Operating Systems Admin& Secur [1,2]	3
	Credit Hours	**15**
Second Semester		
ITFN 4014	Internship Cooperative	3
Major Concentration		3
CSCI 5201	Database Theory and Design [2,3]	3
Free Electives		3
Free Electives		3
	Credit Hours	**15**
	Total Credit Hours	**30**

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
Concentration Course		3
	Credit Hours	**12**
Second Semester		
CSCI 6599	Special Project	3
Concentration Course		3
Concentration Course		3
MSDS Electives		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**
Second Semester		
CSCI 6600	Thesis	3