COMPUTER AND INFORMATION SCIENCE/ CYBERSECURITY

Students with an interest in both areas can pursue a dual BS program in Computer and Information Science and Cybersecurity and thus can earn two BS degrees at the same time:

- BS degree in Computer and Information Science (Information Systems Concentration)
- BS degree in Cybersecurity and Information Assurance (Cybersecurity and Privacy or Digital Forensics Concentration)

The dual degree program requires specified coursework that equals a minimum of 138 total credits.

Dearborn Discovery Core

Please see the Dearborn Discovery Core (General Education) (https://umdearborn.edu/dearborn-discovery-core/) webpage or additional information.

Foundational Studies

Writing and Communication (GEWO) – 6 Credits

Upper-Level Writing Intensive (GEWI) – 3 Credits

Quantitative Thinking and Problem Solving (GEQT) – 3 Credits

Critical and Creative Thinking (GECC) – 3 Credits

Areas of Inquiry

Natural Science (GENS) – 7 Credits

- Lecture/Lab Science Course
- Additional Science Course

Social and Behavioral Analysis (GESB) – 9 Credits

Humanities and the Arts (GEHA) – 6 Credits

Intersections (GEIN) – 6 Credits

Capstone

Capstone (GECE) – 3 Credits

Major Requirements

In addition to completion of the Dearborn Discovery Core, the following courses are required to earn a dual BS degree in Computer and Information Science and Cybersecurity and Information Assurance.

Prerequisite Courses

Code	Title	Credit Hours
COMP 105	Writing & Rhetoric I	3
COMP 270	Tech Writing for Engineers (Fulfills 3 credits of DDC Written and Oral Communication)	3
ECON 201	Prin: Macroeconomics (Fulfills 3 credits of DDC Social and Behavioral Analysis)	3
or ECON 202	Prin: Microeconomics	
CRJ 200	Intro to Criminal Justice (Fulfills 3 credits DDC Social and Behavioral Analysis)	3
PHIL 240	Ethics	3
Select a two course sequence from the following:		8
BIOL 130 & BIOL 320	Intro Org and Environ Biology and Field Biology	
CHEM 134 & CHEM 136	General Chemistry IA and General Chemistry IIA	
GEOL 118 & GEOL 218	Physical Geology and Historical Geology	
PHYS 125 & PHYS 126	Introductory Physics I and Introductory Physics II	
PHYS 150 & PHYS 151	General Physics I and General Physics II	
MATH 115	Calculus I	4
MATH 116	Calculus II	4
MATH 227	Introduction to Linear Algebra	3
CIS 150	Computer Science I	4
CIS 200	Computer Science II	4
CIS 275	Discrete Structures I	4
CIS 275	Discrete Structures I	4
IMSE 317	Eng Probability and Statistics	3
ACC 298	Financial Accounting	3

Dual Major in CSCI Core Courses

Code	Title	Credit Hours
CIS 310	Computer Org and Assembly Lang	4
CIS 350	Data Struc and Algorithm Anlys	4
CIS 375	Software Engineering I	4
CIS 421	Database Mgmt Systems	4
CIS 427	Comp Networks and Dis Process	4
CIS 435	Web Technology	3
CIS 450	Operating Systems	4
CIS 479	Intro to Artificial Intel	3
CIS 4951	Design Seminar I	2
CIS 4952	Design Seminar II	2
ENGR 400	Appl Business Tech for Engr	3
or ENT 400	Entrepreneurial Thinking&Behav	
OB 354	Behavior in Organizations	3

Concentration in Information Systems Courses

Code	Title	Credit Hours
IMSE 3005	Intro to Operations Research	4
CIS 425	Information Systems	4
CIS 476	Soft Arch & Design Patterns	3
Take one COURSE FROM the following:		
CIS 296	Java Programming	3
or CIS 297	Intro to C Sharp	
or CIS 298	Intro to Python	

Select either the Digital Forensics Concentration OR the Cybersecurity and Privacy Concentration

Code	Title	Credit Hours
Digital Forensics Concentration Courses		
CIS 387	Digital Forensics I	4
CIS 467	Digital Forensics II	4
CIS 447	Intro Computr & Ntwrk Security	3
CRJ 468	Criminology	3
CRJ 475	Digital Evidence	3
CRJ 487	Forensic Science Evidence in Criminal Cases	3
CRJ 409	Intel and Homeland Security	3
or CRJ 474	Cyber Crimes	
Cybersecurity And Privacy Concentration Courses		
CIS 316	Prac. Comp. Sec.	3
CIS 446	Wireless & Mobi Comp Security	3
CIS 447	Intro Computr & Ntwrk Security	3
CIS 4851	Data Security and Privacy	3
CRJ 409	Intel and Homeland Security	3
ECE 427	Digi Content Protec	4
or CIS 449	Intro to Software Security	
MATH 396	Introduction to Cryptography	3

CSCI Electives

Code	Title	Credit Hours
Select 6-8 credits from the following: [1]		**6-8**
CIS 285	Software Engineering Tools	3
CIS 316	Prac. Comp. Sec.	3
CIS 376	Software Engineering II	4
CIS 381	Industrial Robots	4
CIS 387	Digital Forensics I	4
CIS 411	Introduction to Natural Language Processing	3
CIS 436	Mobile App Des & Impl	3
CIS 437	Advanced Networking	3
CIS 439	Text Mining and Information Retrieval	3
CIS 446	Wireless & Mobi Comp Security	3
CIS 447	Intro Computr & Ntwrk Security	3
CIS 449	Intro to Software Security	3
CIS 467	Digital Forensics II	4
CIS 483	Deep Learning	3
CIS 487	Computer Game Design & Implem	3
CIS 489	Edge Computing	3
CIS 4851	Data Security and Privacy	3
ENGR 399	Experiential Honors Prof. Prac	1
ENGR 492	Exper Honors Directed Research	1
ENGR 493	Exper Hnrs Dir Dsgn	1

[1] Select electives not used to fulfill the requirements of your concentration.