

NAME:**STUDENT ID#:****LAST UPDATED:**
UNIVERSITY OF NORTHERN IOWA
COLLEGE OF INFORMATION SCIENCE & TECHNOLOGY

Optional Concentrations

GAME PROGRAMMING & DESIGN (18 CREDIT HRS)					
Course #	Course Name	Grade	Cr	Notes	
CORE COURSES (9 HRS)					
CSCI 2510	Intro to Game Prgrmg				
CSCI 3510	Adv Game Programming				
CSCI 4620	Computer Graphics				
ELECTIVE COURSES* (9 HRS)					
CSCI 1280	Intro to Computational Science				
CSCI 2310	Video Game Design				
CSCI 2620	2-D Graphics and Image Processing				
CSCI 4250	Human-Comp Interaction				
CSCI 4260	UI Design & Development				
CSCI 4450	Intro to Artificial Intelligence				
CSCI 4660	Automata, Comp & Formal Lang.				
CSCI 4850	Database Mgmt Systems				
ART 3140	Comp Generated Imagery				
ART 3160	Game Design as Art				
Note: Limit of 1 Non-CSCI Elective Course					
Remaining:			18	Compl:	0

MAJOR: COMPUTER SCIENCE

INFORMATION ASSURANCE (18 CREDIT HRS)					
Course #	Course Name	Grade	Cr	Notes	
CORE COURSES (9 HRS)					
CYBR 3600	Info Security, Policy & Aware				
CYBR 4360	Found of Info Assurance				
CSCI/CYBR 4380	Comp & Network Forensics				
ELECTIVE COURSES* (9 HRS)					
CYBR 2600	Systems Administration				
CSCI/CYBR 3450	Natural Language Processing				
CSCI/MATH 4560	Nmbr Theory&Cryptograph				
CYBR 3570	OR Cryptography				
CYBR 4390	Mobile Device Forensics				
CSCI/CYBR 4430	Quantum Computing and Cryptography				
CYBR 4440	Industrial Control System Security				
CYBR 4450	Host-Based Vulnerability				
CYBR 4460	Network-Based Vulnerability				
CYBR/CIST 4540	Computer Security Mgmt				
Remaining:					
			18	Compl:	0

INTERNET TECHNOLOGIES (18 CREDIT HRS) ADDED 11/25/19					
Course #	Course Name	Grade	Cr	Notes	
CORE COURSES (9 HRS)					
CSCI 2850	Prgrmmg on the Internet				
CSCI 3830	Adv JAVA Programming				
CSCI 3850	Funds of Web Search Tech				
ELECTIVE COURSES* (9 HRS)					
CSCI 3450	Natural Language Proc				
CSCI 4100	Intro to Algorithms				
CSCI 4150	Graph Theory & Apps				
CSCI 4250	Interactions				
CYBR 4460	Network Vuln. Discovery				
CSCI 4900	Internet Systems Devlp.				
CSCI 4470	Pattern Rcnitions				
CSCI 4850	Database Management				
CSCI 4890	Data Warehousing & Data Mining				
Remaining:					
			18	Compl:	0

ARTIFICIAL INTELLIGENCE CONCENTRATION (18 CREDIT HRS)					
Course #	Course Name	Grade	Cr	Notes	
CORE COURSES (6 HRS)					
CSCI 3450	Natural Language Processing				
CSCI 4450	Intro to Artificial Intelligence				
ELECTIVE COURSES* (12 HRS)					
CSCI 2410	Intro to Python and Data Analytics				
CSCI 2510	Intro to Game Programming				
CSCI 3510	Adv. Game Programming				
CSCI 3850	Foundations of Web Search Tech				
CSCI 4100	Intro to Algorithms				
CSCI 4150	Graph Theory & Application				
CSCI 4250	Human Comp Interaction				
CSCI 4470	Pattern Rcnitions				
CSCI 4850	Database Management				
CSCI 4890	Data Warehousing & Data Mining				
ISQA 4010	Business Ingelligence				
MATH 4450	Machine Learning & Data Mining				
PHIL 2010	Symbolic Logic				
Remaining:					
			18	Compl:	0

SOFTWARE ENGINEERING (18 CREDIT HRS)					
Course #	Course Name	Grade	Cr	Notes	
CORE COURSES (6 HRS)					
CSCI 3830	Adv Java Programming				
CSCI 4250	Human Comp Interaction				
ELECTIVE COURSES* (12 HRS)					
CSCI 2830	Object-Orientated Software Engineering Fund.				
CSCI 4260	UX Design				
CSCI 4850	Database Management				
CSCI 4900	Internet Systems Development				
CIST 4910	Systems Dev. in Open Source Communities				
Remaining:					
			18	Compl:	0

* Elective lists are not exhaustive. Students may take other relevant courses as electives with prior approval of the Computer Science Undergraduate Program Committee (UPC).

CSCI majors may complete the concentrations above and apply selected courses toward the Core Extension area.

Students are responsible for prerequisite courses.

Last update: March 2022

Advising worksheet corresponds to the 2022-2023 UNO Catalog.