

Computer Information Systems - Information Technology (grid only)

Course Sequence:

Semester 1

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
ENGL 101 - English Composition I		3 credits	Writing/Research/Info Lit1
CIS 103 - Computer Applications & Concepts		3 credits	Technological Competency
CIS 105 - Computer Systems Maintenance		4 credits	
FNMT 118 - Intermediate Algebra or above	FNMT 017 or FNMT 019 completed or FNMT 118 (or higher) placement	3 credits	Quantitative Reasoning

Semester 2

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
MATH 121 - Computer Mathematics and Logic or MATH 163 - Discrete Mathematics * or ELEC 130 - Digital Electronics	For MATH 121: FNMT 017 or FNMT 019 completed or FNMT 118 (or higher) placement For MATH 163: MATH 161 with a grade of "C" or better, or placement in MATH 162 or higher For ELEC 130: FNMT 118 completed or higher math placement	3 or 4 credits	
ENGL 102 - The Research Paper	ENGL 101 with a grade of "C" or better	3 credits	Writing/Research/Info Lit 2

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
ENGL 115 - Public Speaking (preferred) or ENGL 117 - Group and Team Communication	ENGL 101 , which may be taken concurrently	3 credits	Oral Communication/ Creative Expression
CIS 150 - Network Technology		4 credits	
CIS 106 - Introduction to Computer Programming		4 credits	

Semester 3

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
SOC 101 - Introduction to Sociology or HIST 121 - World History: The Distant Past or HIST 122 - World History: The Recent Past or ANTH 112 - Cultural Anthropology or SOC 115 - Gender and Society	For SOC 115: ENGL 101 with a grade of "C" or better	3 credits	Cultural Analysis and Interpretation
CIS 205 - Database Management Systems	CSCI 112 which may be taken concurrently) or CIS 103 or CSCI 118	4 credits	
CIS or CSCI Concentration Course **		3 or 4 credits	
CIS or CSCI Concentration Course **		3 or 4 credits	
CIS or CSCI Concentration Course **		3 or 4 credits	

Semester 4

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
CIS 270 - Systems Analysis and Design	CIS 205	4 credits	
CIS or CSCI Concentration Course**		3 or 4 credits	
CIS or CSCI Concentration Course**		3 or 4 credits	
PHYS 111 - General Physics I (preferred) or PHYS 105 - Survey of Physics	For PHYS 111: MATH 162 or MATH 171 For PHYS 105: FNMT 017 or placement in FNMT 118 or higher placement	4 credits	Scientific Reasoning

Minimum Credits Needed to Graduate: 60

* Students who are pursuing the programming concentration courses should take MATH 163

** Concentration Courses:

Cybersecurity Concentration Courses

- [CIS 152](#) - Introduction to Cybersecurity
- [CIS 155](#) - Principles of Operating Systems
- [CIS 114](#) - JavaScript I
- [CIS 204](#) - Fundamentals of Linux and Unix
- [CIS 252](#) - Windows Server Configuration
- [CIS 259](#) - Computing & Network Security
- [CIS 261](#) - Cyber Investigation
- [CIS 274](#) - Ethical Hacking & Penetration Testing

Web Design Concentration Courses

- [CIS 114](#) - JavaScript I
- [CIS 130](#) - Web Page Design I
- ~~[CIS 140](#) - Principles of Desktop and Electronic Publishing~~
- [CIS 228](#) - JavaScript II
- [CIS 230](#) - Web Page Design II
- [CIS 244](#) - Server-Side Web Development

- [CIS 288](#) - Cloud Computing

Programming Concentration Courses

- [CSCI 111](#) - Computer Science I
- [CSCI 112](#) - Computer Science II
- [CSCI 118](#) - Foundations of Data Science
- [CSCI 125](#) - Introduction to Video Game and Simulation Development
- [CSCI 211](#) - Data Structures and Algorithms
- [CSCI 213](#) - Computer Organization
- [CSCI 218](#) - Statistics for Computing and Data Science
- [CSCI 221](#) - Machine Learning
- [CIS 200](#) - Apple App Development I
- [CIS 201](#) - Apple App Development II
- [CIS 204](#) - Fundamentals of Linux and Unix
- [CIS 211](#) - Android App Development I
- [CIS 212](#) - Android App Development II

Networking Concentration Courses

- [CIS 252](#) - [Managing Network Servers](#)
- ~~[CIS 253](#) - [Windows Server Administration](#)~~
- [CIS 256](#) - [Network Routing and Switching](#)
- ~~[CIS 257](#) - [Advanced Cisco Routing and Switch Technology](#)~~
- [CIS 259](#) - Computing and Network Security
- [CIS 271](#) - IT Project Management
- [CIS 297](#) - Network Technology and Management Capstone

Courses and Completion Sequence:

Semester 1

Course Number and Name	Credits	Advisory Notes
CIS 103 - Computer Applications & Concepts	3 credits	CIS 103 is prerequisite for CIS 205 and elective course CIS 130 . Fulfills Technological Competency requirement
ENGL 101 - English Composition	3 credits	Fulfills Writing, Research, Info Lit 1 requirement
CIS 105 - Computer Systems Maintenance	3 credits	Critical course: CIS 105 is prerequisite for many other CIS courses and must be taken in the first two semesters

Course Number and Name	Credits	Advisory Notes
<u>FNMT 118 - Intermediate Algebra</u> or higher	3 credits	Fulfills Quantitative Reasoning requirement

Semester 2

Course Number and Name	Credits	Advisory Notes
MATH 121 - Computer Mathematics and Logic or ELEC 130 - Digital Electronics MATH 163 - Discrete Mathematics	3 or 4 credits	For MATH 163 a Prerequisite of MATH 161 with a grade of "C" or better or MATH 162 or higher
ENGL 102 - The Research Paper	3 credits	Fulfills Writing, Research, Info Lit 2 requirement
ENGL 115 - Public Speaking (preferred) or ENGL 117 - Group and Team Communication	3 credits	Fulfills Oral Communication/Creative Expression requirement
CIS 150 - Network Technology	4 credits	CIS 150 is a critical course as it is a prerequisite for many other CIS courses and must be taken in the first two semesters. CIS 150 is a prerequisite for elective courses CIS 252 and CIS 256
CIS 106 - Introduction to Computer Programming	4 credits	CIS 106 is a critical course for students who wish to pursue a career in software development/computer programming.

Semester 3

Course Number and Name	Credits	Advisory Notes
SOC 101 - Introduction to Sociology or HIST 121 - World History: The Distant Past or HIST 122 - World History: The Recent Past or ANTH 112 - Cultural	3 credits	Prerequisite for SOC 115: ENGL 101 with a grade of "C" or better Fulfills Cultural Analysis & Interpretation requirement

Course Number and Name	Credits	Advisory Notes
Anthropology or SOC 115 - Gender and Society		
CIS 205 - Database Management Systems	4 credits	CIS 205 is a prerequisite for CIS 270
CIS or CSCI Concentration Course 1*	3 or 4 credits	Students must receive approval to register for more than 18 credits during a fall or spring semester. Please see an advisor for assistance.
CIS or CSCI Concentration Course 2*	3 or 4 credits	
CIS or CSCI Concentration Course 3*	3 or 4 credits	

Semester 4

Course Number and Name	Credits	Advisory Notes
CIS 270 - Systems Analysis and Design	4 credits	CIS 205
CIS or CSCI Concentration Course 4*	3/4 credits	
CIS or CSCI Concentration Course 5*	3/4 credits	(if necessary to reach the minimum of 15 credits of CIS or CSCI electives)
PHYS 111 - General Physics I (preferred) PHYS 105 - Survey of Physics	4 credits	Prerequisite for PHYS 111: MATH 162 or MATH 171 Fulfills Scientific Reasoning requirement