

Computer Information Systems - Information Technology (course sequence only)

Course Sequence:

Semester 1

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<u>SOC 101 - Introduction to Sociology</u> or <u>HIST 121 - Global History I</u> or <u>HIST 122 - Global History II</u> or <u>ANTH 112 - Cultural Anthropology</u> or <u>SOC 115 - Gender and Society</u>	For SOC 115: <u>ENGL 101</u> with a grade of “C” or better	3 credits	Social Sciences Interpretive Studies American/Global Diversity Writing Intensive
<u>ENGL 101 - English Composition I</u>		3 credits	ENGL 101
<u>CIS 103 - Computer Applications & Concepts</u>		3 credits	Tech Comp
<u>CIS 105 - Computer Systems Maintenance</u>		4 credits	

Semester 2

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<u>FNMT 118 - Intermediate Algebra</u> or above		3 credits	Mathematics
<u>ENGL 102 - The Research Paper</u>	<u>ENGL 101</u> with a grade of “C” or better	3 credits	<u>ENGL 102</u> , Info Lit
<u>ENGL 115 - Public Speaking</u> (preferred) or <u>ENGL 117 - Group and Team Communication</u>	<u>ENGL 101</u> , which may be taken concurrently	3 credits	Humanities
<u>CIS 150 - Network Technology</u>		4 credits	
<u>CIS 106 - Introduction to Computer Programming</u>		4 credits	

Semester 3

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<u>MATH 121 - Computer Mathematics and Logic</u> or <u>MATH 163 - Discrete Mathematics</u> * or <u>ELEC 130 - Digital Electronics</u>	For MATH 163: <u>MATH 161</u> with a grade of "C" or better, or placement in <u>MATH 162</u> or higher For ELEC 130: <u>FNMT 118</u> or higher	3 or 4 credits	
<u>CIS 205 - Database Management Systems</u>	<u>CSCI 112</u> which may be taken concurrently), or <u>CIS 103</u> or <u>CSCI 118</u>	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.
<u>CIS 270 - Systems Analysis and Design</u>	<u>CIS 205</u> with a grade of "C" or better	4 credits	
CIS or CSCI Concentration Course**		3 or 4 credits	
CIS or CSCI Concentration Course**		3 or 4 credits	
<u>PHYS 111 - General Physics I</u> (preferred) or <u>PHYS 105 - Survey of Physics</u>	For PHYS 111: <u>MATH 162</u> or <u>MATH 171</u> For PHYS 105: <u>FNMT 017</u> or placement in <u>FNMT 118</u> or higher placement	4 credits	Natural Sciences

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 215](#) - Introduction to Android Development~~
- [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](#) - Windows Server Configuration
- [CIS 253](#) - Windows Server Administration
- [CIS 256](#) - Cisco Routing Technology
- [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

General Education Requirements: All general education requirements necessary for graduation are met through the courses in the program as indicated above. Students who wish to take courses that differ from the general education courses indicated above must complete a course substitution request form. To access the form, login to the [MyCCP portal](#), and in the **Student** tab, under **Electronic Forms**, click on the **Records and Registration Forms** link, then choose **Request For Course Substitution Of Graduation Requirement** link. A [more detailed explanation](#) of the College's general education requirements is also available.

For More Information, Contact: The Division of Business and Technology, Room B2-22, 1700 Spring Garden Street, Philadelphia, PA 19130, Telephone (215) 751-8785; or the College Information Center (215) 751-8010.

Courses and Completion Sequence

The following courses and sequence of courses is designed for the optimal success and completion of the Computer Information Systems - Information Technology degree/certificate. Any alterations should be discussed with your academic advisor.

Semester 1

Course Number and Name	Credits	Advisory Notes	Course Type
<u>CIS 103 - Computer Applications & Concepts</u>	3 credits	Critical course: CIS 103 is prerequisite for many other CIS courses and must be taken in the first two semesters	Major Course
<u>SOC 101 - Introduction to Sociology</u> or <u>HIST 121 - Global History I</u> or <u>HIST 122 - Global History II</u> or <u>ANTH 112 - Cultural Anthropology</u> or <u>SOC 115 - Gender and Society</u>	3 credits	Prerequisite for SOC 115: ENGL 101 with a grade of "C" or better	Social Sciences Elective Writing Intensive, Interpretive Studies, American/Global Diversity
<u>ENGL 101 - English Composition</u>	3 credits		ENGL 101
<u>CIS 105 - Computer Systems Maintenance</u>	3 credits	Critical course: CIS 105 is prerequisite for many other CIS courses and must be taken in the first two semesters	Major Course

Must earn a grade of "C" or better in all courses

Semester 2

Course Number and Name	Credits	Advisory Notes	Course Type
<u>FNMT 118 - Intermediate Algebra</u> or higher	3 credits		Mathematics
<u>ENGL 102 - The Research Paper</u>	3 credits		ENGL 102 Info Literacy

Course Number and Name	Credits	Advisory Notes	Course Type
<u>ENGL 115 - Public Speaking</u> (preferred) or <u>ENGL 117 - Group and Team Communication</u>	3 credits		Humanities Elective
<u>CIS 150 - Network Technology</u>	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	Major Course
<u>CIS 106 - Introduction to Computer Programming</u>	4 credits	CIS 106 is a critical course for students who wish to pursue a career in software development/computer programming.	Major Course

Must earn a grade of "C" or better in all courses

Semester 3

Course Number and Name	Credits	Advisory Notes	Course Type
<u>MATH 121 - Computer Mathematics and Logic</u> <u>ELEC 130 - Digital Electronics</u> <u>MATH 163 - Discrete Mathematics</u>	3 or 4 credits	For MATH 163 a Prerequisite of MATH 161 with a grade of "C" or better or MATH 162 or higher	Major Course
<u>CIS 205 - Database Management Systems</u>	4 credits	CIS 205 is a prerequisite for elective course CIS 270	Major Course
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.	Concentration Elective
CIS or CSCI Concentration Course 2*	3 or 4 credits		Concentration Elective
CIS or CSCI Concentration Course 3*	3 or 4 credits		Concentration Elective

Must earn a grade of "C" or better in all courses. Students must receive approval to register for more than 18 credits during a fall or spring semester. Please see an advisor for assistance.

* See the college catalog for complete list of concentration courses.

Semester 4

Course Number and Name	Credits	Advisory Notes	Course Type
<u>CIS 270 - Systems Analysis and Design</u>	4 credits	For CIS 270: CIS 205 is a prerequisite	Major Course
CIS or CSCI Concentration Course 4*	3/4 credits		Concentration Elective
CIS or CSCI Concentration Course 5*	3/4 credits	(if necessary to reach the minimum of 15 credits of CIS or CSCI electives)	Concentration Elective
<u>PHYS 111 - General Physics I</u> (preferred) <u>PHYS 105 - Survey of Physics</u>	4 credits	Prerequisite for PHYS 111: MATH 162 or MATH 171	Natural Science Elective

Must earn a grade of "C" or better in all courses

* See the college catalog for complete list of concentration courses.