

# DEPARTMENT OF COMPUTER AND INFORMATION SCIENCE

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The computer and information science department offers three undergraduate programs, a bachelor of science in information systems, a bachelor of science in computer science, and an associate of science in information technology. Each program enables the student to study computing in a setting that uses a variety of state-of-the-art computer equipment and technology.

The program in information systems prepares students for careers as application programmers/analysts in a business environment and for further graduate work in information systems. Business courses supplement a strong core of technical courses to enable students to design and implement business processing systems that require programming, databases, web development, networking, and client-server processing.

The program in computer science prepares students for careers as systems programmers in a scientific and/or engineering environment and for further graduate work in computer science. Mathematics and engineering courses supplement a strong core of computer science courses, enabling students to design and implement software that requires complicated computations, data structures and interfaces.

The program in information technology prepares students for careers in technology support.

## Curriculum in Information Systems

Freshman Year	Fall	Spring
Computer and Information Science Orientation (COMS 1403)	3	
Computer and Information Science Lab (COMS 1411)	1	
Microcomputer Applications (COMS 2003)		3
Foundations of Computer Programming I (COMS 2104)		4
Calculus for Business and Economics (MATH 2243)	3	
Discrete Math (MATH 2703)		3
Principles of Economics I (ECON 2003)		3
Social Sciences <sup>1</sup>	6	
English Composition I, II (ENGL 1013, 1023) <sup>1</sup>	3	3
Physical Activity <sup>1</sup>		1
<b>Total</b>	<b>16</b>	<b>17</b>
Sophomore Year		
Foundation of Computer Programming II (COMS 2203)	3	
Data Structures (COMS 2213)		3
Computer Networks and Architecture (COMS 2703)	3	
File Processing in COBOL (COMS 2853)		3
Technical Writing (ENGL 2053)	3	
Accounting Principles I (ACCT 2003)	3	
Accounting Principles II (ACCT 2013)		3
Business Statistics (BUAD 2053)		3
Principles of Economics II (ECON 2013)		3
Science <sup>1</sup>	4	
Physical Activity <sup>1</sup>		1
<b>Total</b>	<b>16</b>	<b>16</b>
Junior Year		
Visual Programming (COMS 3503)		3
Administering & Using the IBM Platform (COMS 3513)	3	
Systems Software and Architecture (COMS 3903)	3	
Database Concepts (COMS 4203)	3	
Data Communications and Networks (COMS 4703)		3

### Curriculum in Information Systems

Principles of Marketing (MKT 3043)		3	
Management and Organizational Behavior (MGMT 3003)		3	
Business and Professional Speaking (SPH 2173)		3	
Science <sup>1</sup>			4
Social Science <sup>1</sup>		3	
	<b>Total</b>	<b>15</b>	<b>16</b>

#### Senior Year

Systems Analysis and Design I (COMS 4033)		3	
Systems Analysis and Design II (COMS 4043)			3
Information Systems Resource Management (COMS 4053)			3
Application Program Development (COMS 4133)		3	
Client/Server Systems (COMS 4303)		3	
Computer Science Elective <sup>2</sup>			3
Elective (3000-4000 level)		3	3
Humanities <sup>1</sup>		3	
Fine Arts <sup>1</sup>			3
	<b>Total</b>	<b>15</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements" on page 76.

<sup>2</sup>1000-level courses may not be used to satisfy this requirement.

### Curriculum in Computer Science

Freshman Year	Fall	Spring
Computer and Information Science Orientation (COMS 1403)	3	
Computer and Information Science Lab (COMS 1411)	1	
Microcomputer Application (COMS 2003)		3
Foundations of Computer Programming I (COMS 2104)		4
Introduction to Business Systems (BUAD 1003)	3	
Discrete Mathematics (MATH 2703)	3	
Calculus I (MATH 2914)		4
English Composition I, II (ENGL 1013, 1023) <sup>1</sup>	3	3
Social Sciences <sup>1</sup>	3	
Physical Activity <sup>1</sup>		1
	<b>Total</b>	<b>16</b>

#### Sophomore Year

Foundations of Computer Programming II (COMS 2203)	3	
Data Structures (COMS 2213)		3
Computer Organization and Programming (COMS 2223)		3
Computer Networks and Architecture (COMS 2703)	3	
Digital Logic Design (ELEG 2133)	3	
Digital Logic Design Lab (ELEG 2131)	1	
Technical Writing (ENGL 2053)	3	
Calculus II (MATH 2924)	4	
Business and Professional Speaking (SPH 2173)		3
Social Sciences <sup>1</sup>		3
Biological Science <sup>1</sup>		4
	<b>Total</b>	<b>17</b>

#### Junior Year

Advanced Data Structures (COMS 3213)	3	
Operating Systems (COMS 3703)		3
Personal Software Engineering (COMS 4163)		3
Database Concepts (COMS 4203)	3	
Data Communications and Networks (COMS 4703)		3
General Physics I (PHYS 2114)	4	

### Curriculum in Computer Science

General Physics II (PHYS 2124)		4
Applied Statistics I (MATH 3153)	3	
Humanities <sup>1</sup>	3	
Social Sciences <sup>1</sup>		3
<b>Total</b>	<b>16</b>	<b>16</b>

#### Senior Year

Systems Analysis and Design I (COMS 4033)	3	
Systems Analysis and Design II (COMS 4043)		3
Organization of Programming Languages (COMS 4103)	3	
Compiler Design (COMS 4403)		3
Computer Science Elective (3000-4000 level)	3	
Elective (3000-4000 level)		3
Linear Algebra (MATH 4003)	3	
Upper-level Technical Elective <sup>3</sup>		3
Fine Arts <sup>1</sup>		3
Social Sciences <sup>1</sup>	3	
Physical Activity <sup>1</sup>		1
<b>Total</b>	<b>15</b>	<b>16</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements" on page 76.

<sup>2</sup>1000 level courses may not be used to satisfy requirement.

<sup>3</sup>The Technical Elective should be taken from COMS, ELEG, MATH or Science

### Associate of Science in Information Technology

The Associate of Science in Information Technology program enables students to develop skills in the areas of web processing, databases, networking, programming, and various operating systems. These skills enable students to seek positions within the information technology industry.

### Curriculum in Information Technology Associate of Science Degree

#### Freshman Year

	Hours
First Semester	
Computer and Information Science Orientation (COMS 1403)	3
Computer and Information Science Lab (COMS 1411)	1
Microcomputer Applications (COMS 2003)	3
College Algebra (MATH 1113) <sup>2</sup>	3
English Composition I (ENGL 1013) or Honors Composition I (ENGL 1043)	3
Social Science <sup>1</sup>	3
<b>Total</b>	<b>16</b>

#### Second Semester

Web Publishing I (COMS 1333)	3
Foundations of Computer Programming I (COMS 2104)	4
Introduction to Databases (COMS 2233)	3
English Composition II (ENGL 1023) or Honors Composition II (ENGL 1053)	3
Social Science <sup>1</sup>	3
<b>Total</b>	<b>16</b>

#### Sophomore Year

First Semester	
Foundations of Computer Programming II (COMS 2203)	3
Computer Networks (COMS 2703)	3
Computer Science Elective <sup>3</sup>	3
Introduction to Physical Science (PHSC 1013)	3
Physical Science Laboratory (PHSC 1021)	1
Technical Writing (ENGL 2053)	3
<b>Total</b>	<b>16</b>

### Curriculum in Information Technology Associate of Science Degree

Second Semester

Business and Professional Speaking (SPH 2173)	3
Computer Science Electives <sup>3</sup>	9
General Electives	3
<b>Total</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements" on page 76.

<sup>2</sup>The mathematics requirement may be fulfilled by taking MATH 1113 or any higher level mathematics course.

<sup>3</sup>1000-level courses may not be used to satisfy this requirement.