



## Information Technology

### Associate in Applied Science Degree, Career program

Division of Business Administration and Computing, Associate Dean: Nancy Latour

Department Chair: Hans-Peter Appelt

The career program in Information Technology is designed to offer students several paths of study leading to an A.A.S. degree in their chosen field. The program is designed to be flexible and diverse so as to offer students the opportunity to choose a career path that best suits their interests and provides them with marketable skills for entering the global job market, or for continuing their education. This program offers specialization in web technology, network technology, technical support specialist, and high performance computing. Avenues for various career paths could include positions at national supercomputing and science laboratories, continuing on in the undergraduate and eventually graduate programs at other institutions, or positions in the corporate world (banks, financial institutions, etc.)

Graduates will be able to demonstrate the computer technology knowledge needed for entry-level positions in business and industry and the ability to compete for those jobs; specialize in one or more computer technology concentrations; and use their broad based liberal arts education in multiple applications and occupations.

The program also provides educational enhancement opportunities to local employers who want to advance the education of their employees.

Advisor assistance in selection of courses is highly recommended.

*High school or equivalent preparation required: No special requirements.*

#### Program Requirements

English (ENGL 1010 and 1020 or 1030. By placement)* .....	6
Mathematics (MATH 1230 or higher)* .....	3
Social Sciences elective .....	6
Liberal Arts & Sciences elective .....	3
Laboratory Science elective .....	3
Free electives .....	0-3
Wellness .....	2

#### Concentration Requirements (see sample sequence)

Concentration requirements .....	25-42
Program electives .....	3-6
Total hours .....	63-70 <sup>4</sup>

\*Based on placement, students may be required to take ENGL 0950 and/or ENGL 0990 before taking ENGL 1010, and MATH 0960 before taking a math credit course.

Students will be assessed for computer fundamental knowledge and placed in a Computer Essential course (CSCS 1200) the first semester, if needed. The Computer Essential course will count as a program elective if taken.

#### INFORMATION TECHNOLOGY: COMPUTER AND NETWORK TECHNOLOGY

*Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.*

##### First Semester

English Composition I (ENGL 1010) .....	3
Mathematics <sup>1</sup> (MATH 1230) .....	3
Network Fundamentals (CSNT 1200) .....	4
Computer Hardware Technologies (CRST 1010) .....	4
Social Sciences Elective <sup>3</sup> .....	3

##### Second Semester

English Composition II (ENGL 1020) .....	3
Social Sciences Elective <sup>3</sup> .....	3
Operating Systems Technologies (CRST 1030) .....	4
Structured & OO Problem Solving (CSCS 1240) .....	3
LAN-WAN Networking (CSNT 1400) .....	4
Wellness (Awareness) .....	1

##### Third Semester

Systems Configuration & Maintenance (CRST 2040) .....	4
LAN Implementation & Configuration (CSNT 2400) .....	4
Laboratory Science Elective <sup>2</sup> .....	3
Data/Voice Communication (CSNT 2000) .....	4
Program Elective .....	3

##### Fourth Semester

Network Project (CSNT 2800) .....	3
Practicum (CRST 2050) .....	4
Seminar (CRST 2060) .....	4
Liberal Arts Elective .....	3
Wellness (Activity) .....	1

<sup>1</sup>Elements of Applied Mathematics I; <sup>2</sup>PHYS 1010 or PHYS 1580 or CHEM 1010 recommended; <sup>3</sup>General Psychology recommended;

<sup>4</sup>Number of hours based on program concentration.



**INFORMATION TECHNOLOGY: WEB TECHNOLOGY**

*Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.*

*First Semester*

English Composition I (ENGL 1010) .....	3
Mathematics <sup>1</sup> (MATH 1230) .....	3
Network Fundamentals (CSNT 1200) .....	4
Website Fundamentals (CSWT 1200) .....	3
Liberal Arts Elective .....	3
Wellness (Awareness) .....	1

*Second Semester*

English Composition II (ENGL 1020) .....	3
Social Sciences Elective <sup>2</sup> .....	3
Introduction to Graphic Design (ARTS 1440) .....	3
Structured & OO Problem Solving (CSCS 1240) .....	3
Program Elective <sup>3</sup> .....	3
Wellness (Activity) .....	1

*Third Semester*

Client-Web Programming (CSWT 2610) .....	3
Web Design (ARTS 2550) .....	3
Laboratory Science Elective .....	3
Java Programming (CSCS 2420) .....	3
Social Sciences Elective .....	3

*Fourth Semester*

Server-Web Programming (CSWT 2620) .....	3
Structured & OO Systems Analysis & Design (CSIT 2310) .....	3
Database System (CSIT 2400) .....	3
Interactive Web Technologies (CSWT 1051) .....	1
Program Elective <sup>3</sup> .....	3
Free Electives .....	3

<sup>1</sup>Elements of Applied Mathematics I; <sup>2</sup>Principles of Economics-Macro and Micro recommended;

<sup>3</sup>ARTS 1400; CSCS 1200, CSCS 1320, 1730, 2210; MCOM 1450; MKTG 2050, or any CSCS, CSIT, CSNT, CSWT, or CRST course.

**INFORMATION TECHNOLOGY: TECHNICAL SUPPORT SPECIALIST**

*Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.*

*First Semester*

English Composition I (ENGL 1010) .....	3
Mathematics <sup>1</sup> (MATH 1230) .....	3
Network Fundamentals (CSNT 1200) .....	4
Website Fundamentals (CSWT 1200) .....	3
Computer Hardware Technologies (CRST 1010) .....	4
Wellness (Awareness) .....	1

*Second Semester*

English Composition II (ENGL 1020) .....	3
Social Sciences Elective .....	3
Operating Systems Technologies (CRST 1030) .....	4
Structured & OO Problem Solving (CSCS 1240) .....	3
Program Elective <sup>2</sup> .....	3

*Third Semester*

Systems Configuration & Maintenance (CRST 2040) .....	4
Interpersonal Communications (SPCH 1060 or SPCH 1080) .....	3
Laboratory Science Elective .....	3
Technical Report Writing (ENGL 1501, ENGL 1502) .....	3
Programming Elective .....	3

*Fourth Semester*

Structured OO & Systems Analysis & Design (CSIT 2310) .....	3
Liberal Arts Elective .....	3
Social Sciences Elective .....	3
Program Elective <sup>2</sup> .....	3
Wellness (Activity) .....	1

<sup>1</sup>Elements of Applied Mathematics I;

<sup>2</sup>Select from CSCS, CSIT, CSNT, CSWT or CRST with advisor's approval.

**INFORMATION TECHNOLOGY: HIGH PERFORMANCE COMPUTING**

*Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.*

*First Semester*

English Composition I (ENGL 1010) .....	3
Mathematics <sup>1</sup> (MATH 1230) .....	3
Network Fundamentals (CSNT 1200) .....	4
First Year Program Elective <sup>2</sup> .....	3
UNIX/Linux Fundamentals (CSCS 1730) .....	4

*Second Semester*

English Composition II (ENGL 1020) .....	3
HPC Fundamentals (CSIT 1320) .....	3
Mathematics (MATH 1240) .....	3
Structured & OO Problem Solving (CSCS 1240) .....	3
C/C++ Programming (CSCS 1320) .....	4
Wellness (Awareness) .....	1

*Third Semester*

Data Structures (CSCS 2320) .....	3
Laboratory Science Elective .....	3
Data Communication (CSCS 2700) .....	3
Systems Programming (CSCS 2730) .....	3
Social Sciences Elective .....	3
HPC Experience I (CSIT 2044) .....	2
Wellness (Activity) .....	1

*Fourth Semester*

HPC Experience II (CSIT 2048) .....	2
HPC Systems and Networking (CSIT 2320) .....	3
Liberal Arts Elective .....	3
Social Sciences Elective .....	3
Second Year Program Elective <sup>3</sup> .....	3
Computer Organization (CSCS 2650) .....	4

<sup>1</sup>Elements of Applied Mathematics;

<sup>2</sup>CSCS 1200, CRST 1010, CSCS 2330, ELEC 1010;

<sup>3</sup>CSCS 2330, 2850; any CRST or CSNT, ELEC 1510