

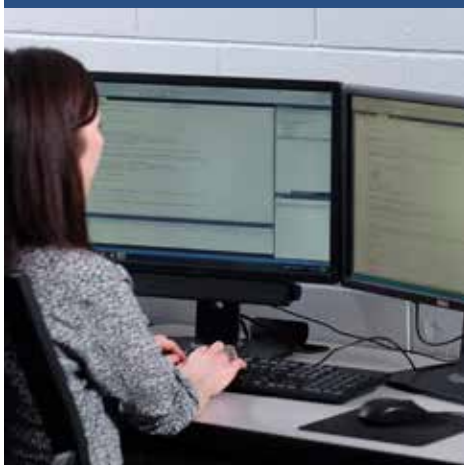


## Associate of Applied Science Degree

### Credit Hours Required for Graduation

Associate of Applied Science Degree: ..... 70.0

- Applications Development focus
- Cybersecurity focus
- Network Management focus
- Computer Support focus



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There is a market for people with software development, cybersecurity, networking, and computer support skills in organizations of all sizes. IT careers are available in every area of the economy.



## APPLICATIONS DEVELOPMENT

### Students learn ...

- Coding in Java, C#, and COBOL
- Web development using HTML, JavaScript, JSP, ASP, and PHP
- Database design and SQL
- Mobile apps development
- Teaming and project development
- Techniques to integrate PC, Web and mainframe applications

### These developers ...

- Design and code applications using different computer platforms
- Document, test and implement code
- Develop and maintain websites
- Design and manage databases
- Develop Web front-end applications to interact with back-end systems
- Maintain existing computer applications



## CYBERSECURITY

### Students learn ...

- Computer communications and network operating systems
- Cisco networking and security
- Attack methods and defense techniques
- Security software and devices

### Security technicians ...

- Configure and maintain secure networks and data systems
- Perform security auditing and penetration testing
- Respond to security incidents



## NETWORK MANAGEMENT

### Students learn ...

- Hardware installation
- Computer communications and network protocols
- Network operating systems
- Cisco networking
- Setup and use of virtual machines

### Network managers ...

- Research and recommend hardware and software purchases
- Set up, monitor and support network systems
- Troubleshoot computer and network problems



## COMPUTER SUPPORT

### Students learn ...

- Customer service skills
- Problem-solving techniques
- Hardware troubleshooting
- Software and operating systems
- Help desk structure and operation
- Basic networking

### Support specialists ...

- Handle customer requests and solve problems
- Install and support computer hardware and software
- Troubleshoot computer problems
- Prepare training materials



## Top Career Options

- Information Systems Technician
- Applications Developer
- Cybersecurity Technician
- Network Manager
- Web Developer



## Graduate Earnings

Recent graduates report an average starting wage of \$23 per hour.



2019-2020 Tuition/Fee Rate Per Credit Hour	
Nebraska Resident	\$108
Out-of-state tuition/fee rate	\$129
<b>Estimated Expenses</b>	
Tuition/Fees	\$ 7560
Books	3400
Special Fees	
Tools/Supplies	
<b>Total:</b>	<b>\$10,960</b>

## Program overview

The Applications Development focus trains students to design and code software applications on different computer platforms (PC, web, mainframe, and mobile). Courses train students to code Java and C# applications for PCs, develop basic iOS and Android apps for mobile devices, and work behind the scenes developing web sites using JavaScript, PHP, ASP, JSP, and SQL. Students also learn to use COBOL and DB2 in a mainframe programming environment.

Cybersecurity students complete hands-on training to meet the growing need for security professionals in IT. Students learn security practices, cyber defense techniques, and digital forensics related to the protection of today's networks and critical information systems.

In the Network Management focus, students set up, maintain, and manage computer networks in both a Windows and Linux environment. They learn to use PowerShell, set up virtual machines, and work with Cisco networking.

Computer Support students are trained to work as the main IT technician in a company or as a member of a team providing help desk and computer support. Students gain hands-on training in the setup, maintenance, troubleshooting, and support of computer hardware and software.

New students are accepted into the program in both the Fall and Spring semesters.

Face-to-face classroom courses are offered day and evening. Many, but not all, courses are available online. Students who are unable to attend day classes can complete all degree requirements taking a combination of evening and online courses.

Students attending full-time can complete the degree in two years. The program welcomes part-time students who choose to carry a lighter load and take longer to complete the degree.

## Special program requirements

All students start into the program taking the same group of courses. While completing those courses, students can make a decision about which focus to pursue.

"Advisor approved INFO electives" can be any INFO course not listed as a requirement in the focus.

Prerequisite and co-requisite INFO and ELEC courses must be completed with a grade of "C" or higher to continue through the program.

## General Education Requirements

See the General Education pages for a complete list.

GELO #1: Oral Communications (Choose ONE)	3.0
SPCH1090 Fundamentals of Human Communication	
SPCH1110 Public Speaking	
SPCH2810 Business & Professional Communication	
GELO #2: Written Communications (Choose ONE)	3.0
ENGL1010 English Composition I	
ENGL1110 Business Communications	
GELO #5: Analytical, Quantitative, and Scientific Reasoning (Choose ONE):	3.0
MATH1040 Business Math	
MATH1050 Thinking Mathematically	
MATH1100 Intermediate Algebra	
A higher level MATH class can be taken based on math placement scores	
GELO #6: Career and Life Skills	3.0
BSAD1010 Microsoft Applications I	
Choose ONE additional course from either of the two areas below:	3.0
GELO #3: Critical Thinking & Problem Solving	
GELO #4: Global Awareness and Citizenship	
	15.0 hours

## Applications Development Focus Requirements

Course #	Course title	Credit hrs.
INFO1151	Information Technology Fundamentals	3.0
INFO1171	PC Operating Systems	3.0
INFO1214	Programming Concepts	2.0
INFO1281	Networking Concepts	2.0
INFO1411	Database Concepts	3.0
INFO1414	Java	4.0
INFO1428	JCL & COBOL	4.0
INFO1431	Web Page Fundamentals	3.0
INFO1434	C#.NET	4.0
INFO2431	JavaScript & jQuery	3.0
INFO2574	Advanced Programming Using Visual Basic	3.0
INFO2584	Mobile Device Programming	3.0

Required courses include the four courses in either PC & Web Option **OR** Integrated Platforms Option:

PC & Web Option		
INFO2411	Advanced Database & SQL	3.0
INFO2525	Web Server Scripting Using PHP	3.0
INFO2534	ASP.NET Using C#	3.0
INFO2644	PC & Web Capstone	4.0
Integrated Platforms Option		
INFO2418	DB2 & SQL	3.0
INFO2514	Java Server Programming	3.0
INFO2528	Advanced COBOL	3.0
INFO2638	Integrated Platforms Capstone	4.0
Advisor approved INFO elective (minimum)		2.0
INFO2700 CIT Practicum <b>OR</b> OFFT2000 Employment Techniques		3.0
		55.0 hours

## Cybersecurity Focus Requirements

INFO1151	Information Technology Fundamentals	3.0
INFO1171	PC Operating Systems	3.0
INFO1214	Programming Concepts	2.0
INFO1281	Networking Concepts	2.0
INFO1411	Database Concepts	3.0
INFO1448	Windows & Hardware Management	4.0
INFO1491	Network Security Fundamentals	3.0
INFO1492	Linux Network Administration	4.0
INFO1494	Windows Server Administration	3.0
INFO2555	PowerShell Fundamentals	2.0
INFO2575	Virtualization Management	2.0
INFO2581	Network Security Systems	3.0
INFO2586	Security Operations & Ethics	2.0
INFO2596	Computer & Digital Forensics	2.0
INFO2691	Enterprise Security Capstone	3.0
ELEC2760	Introduction to Networks	3.0
ELEC2761	Routing & Switching Essentials	3.0
ELEC2900	CCNA Security	3.0
Advisor approved INFO elective (minimum)		2.0
INFO2700 CIT Practicum <b>OR</b> OFFT2000 Employment Techniques		3.0
		55.0 hours

## Network Management Focus Requirements

INFO1151	Information Technology Fundamentals	3.0
INFO1171	PC Operating Systems	3.0
INFO1214	Programming Concepts	2.0
INFO1281	Networking Concepts	2.0
INFO1411	Database Concepts	3.0
INFO1445	Workplace Communication Skills	2.0
INFO1448	Windows & Hardware Management	4.0
INFO1491	Network Security Fundamentals	3.0
INFO1492	Linux Network Administration	4.0
INFO1494	Windows Server Administration	3.0
INFO2555	PowerShell Fundamentals	2.0
INFO2575	Virtualization Management	2.0
INFO2595	Advanced Windows Server	2.0
INFO2697	Networking Capstone	3.0
ELEC2760	Introduction to Networks	3.0
ELEC2761	Routing & Switching Essentials	3.0
ELEC2865	Advanced Networking	4.5
Advisor approved INFO elective (minimum)		3.5
INFO2700 CIT Practicum <b>OR</b> OFFT2000 Employment Techniques		3.0
		55.0 hours

## Computer Support Focus Requirements

INFO1151	Information Technology Fundamentals	3.0
INFO1171	PC Operating Systems	3.0
INFO1214	Programming Concepts	2.0
INFO1281	Networking Concepts	2.0
INFO1411	Database Concepts	3.0
INFO1431	Web Page Fundamentals	3.0
INFO1443	Help Desk Concepts	2.0
INFO1445	Workplace Communication Skills	2.0
INFO1448	Windows & Hardware Management	4.0
INFO1491	Network Security Fundamentals	3.0
INFO1494	Windows Server Administration	3.0
INFO2411	Advanced Database & SQL	3.0
INFO2473	Advanced Excel	1.5
INFO2493	Advanced Access	1.5
INFO2523	Support Techniques	3.0
INFO2533	Collaboration Tools	2.0
INFO2670	Computer Support Capstone	3.0
ELEC2760	Introduction to Networks	3.0
ELEC2761	Routing & Switching Essentials	3.0
Advisor approved INFO elective (minimum)		2.0
INFO2700 CIT Practicum <b>OR</b> OFFT2000 Employment Techniques		3.0
		55.0 hours