

# COMPUTER & INFORMATION SYSTEMS

## Computer & Information Systems

Associate of Applied Science

### PROGRAM DESCRIPTION

The Computer Information Systems (CIS) degree program is designed around a core curriculum and four distinct options. The program’s core provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations and writing. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator and related managerial and administrative roles.

### PROGRAM COSTS

(beyond standard tuition/fees and textbooks)

#### Material Costs

- (8-32 GB usb/flash drive, basic office supplies, notebooks), \$100
- Recommended: a home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

#### Enrollment Fees

- \$10 per credit for online courses

### PROGRAM ENTRANCE REQUIREMENTS

#### Academic Entrance Requirements

- Recommended:
  - High school diploma or GED
  - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric/Critical Thinking II/WR 095 Basic Writing II (“C” or better)

- Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Algebra I equivalent
- Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Intro to Computers: Windows)

### PROGRAM PERFORMANCE STANDARDS

#### Academic Requirements

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

#### Additional Requirements

- All COCC students enrolled in the Computer Information Systems program (which includes requirements for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

### PROGRAM COURSE REQUIREMENTS

#### Core Courses

CIS 120	Computer Concepts	4
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
CIS 297	CIS Professional Capstone	4

#### General CIS AAS Degree

Select 27 credits with a CIS prefix numbered 100 or higher	27
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#### Other Required Courses

Choose one course from the following:	3-4
BA 214 Business Communications	
SP 111 Fundamentals Public Speaking	
WR 122 Argument, Research and Multimodal Composition	
WR 227 Technical Writing	
Choose two courses from the Discipline Studies list (except CS prefix courses) or the recommended electives list below	6-8
Recommend: BA 101, BA 111, BA 112, BA 113, BA 177, BA 178, BA 206, BA 207, BA 211, BA 212, BA 213, BA 217, BA 218, BA 220, BA 222, BA 223, BA 224, BA 226, BA 228, BA 229, BA 239, BA 249, BA 250, BA 286	
Human Relations approved course	3-4
MTH 085 Technical Mathematics I (or higher)	3-4
or BA 104 Business Math	
WR 121 Academic Composition	4

**Total Credits 94-99**

### ADVISING NOTES

Core courses are all offered two to three quarters each academic year. All CIS option courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

## Computer & Information Systems: Computer Aided Drafting

Associate of Applied Science

### PROGRAM DESCRIPTION

The Computer Information Systems (CIS) degree program is designed around a core curriculum and four distinct options. The program's core provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations and writing. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator and related managerial and administrative roles.

The Computer Aided Drafting option prepares students for entry-level employment in the drafting field. Students prepare for advanced CAD applications through an introductory set of CAD-based curriculum. Students will gain experience using dedicated architectural, civil and mechanical software.

### PROGRAM COSTS

(beyond standard tuition/fees and textbooks)

#### Material Costs

- (8-32 GB usb/flash drive, basic office supplies, notebooks), \$100
- Recommended:  
A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

#### Enrollment Fees

- \$10 per credit for online courses

### PROGRAM ENTRANCE REQUIREMENTS

#### Academic Entrance Requirements

- Recommended:
  - High school diploma or GED
  - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric/Critical Thinking II/WR 095 Basic Writing II ("C" or better)
  - Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Algebra I equivalent
  - Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Intro to Computers: Windows)

### PROGRAM PERFORMANCE STANDARDS

#### Academic Requirements

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

#### Additional Requirements

- All COCC students enrolled in the Computer Information Systems program (which includes requirements for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

### PROGRAM COURSE REQUIREMENTS

#### Core Courses

CIS 120	Computer Concepts	4
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4

CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
CIS 297	CIS Professional Capstone	4

#### Computer Aided Drafting Option

CIS 125A1	AutoCAD 1	4
CIS 125A2	AutoCAD 2	4
CIS 135A1	AutoDESK Revit 1	4
CIS 135A2	AutoDESK Revit 2	4
CIS 135C1	AutoCAD Civil 3D	4
CIS 135S1	SolidWorks 1	4
CIS 135S2	SolidWorks 2	4

#### Other Required Courses

Choose one course from the following:	3-4	
BA 214	Business Communications	
SP 111	Fundamentals Public Speaking	
WR 122	Argument, Research and Multimodal Composition	
WR 227	Technical Writing	
Choose two courses from the Discipline Studies list (except CS prefix courses) or the following CIS electives:	6-8	
CIS electives: BA 101, BA 111, BA 112, BA 113, BA 177, BA 178, BA 206, BA 207, BA 211, BA 212, BA 213, BA 217, BA 218, BA 220, BA 222, BA 223, BA 224, BA 226, BA 228, BA 229, BA 239, BA 249, BA 250, BA 286		
Human Relations approved course	3-4	
MTH 085	Technical Mathematics I (or higher)	3-4
or BA 104	Business Math	
WR 121	Academic Composition	4

**Total Credits 95-100**

### ADVISING NOTES

Core courses are all offered two to three quarters each academic year. All CIS option courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

## Computer & Information Systems: Desktop Support

Associate of Applied Science

### PROGRAM DESCRIPTION

The Computer Information Systems (CIS) degree program is designed around a core curriculum and four distinct options. The program's core provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations and writing. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator and related managerial and administrative roles.

The Desktop Support option prepares students to provide technical assistance to computer system users, answer questions, or resolve computer problems for clients in person, via telephone or from a remote location. Other responsibilities may include providing support for computer hardware and software, including printing, installation, word processing, spreadsheets, database, electronic mail and operating systems.

**PROGRAM COSTS**

(beyond standard tuition/fees and textbooks)

**Material Costs**

- (8-32 GB usb/flash drive, basic office supplies, notebooks), \$100
- Recommended:  
A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

**Enrollment Fees**

- \$10 per credit for online courses

**PROGRAM ENTRANCE REQUIREMENTS**

**Academic Entrance Requirements**

- Recommended:
  - High school diploma or GED
  - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric/Critical Thinking II/WR 095 Basic Writing II (“C” or better)
  - Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Algebra I equivalent
  - Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Intro to Computers: Windows)

**PROGRAM PERFORMANCE STANDARDS**

**Academic Requirements**

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

**Additional Requirements**

- All COCC students enrolled in the Computer Information Systems program (which includes requirements for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

**PROGRAM COURSE REQUIREMENTS**

**Core Courses**

CIS 120	Computer Concepts	4
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
CIS 297	CIS Professional Capstone	4

**Desktop Support Option**

Choose a minimum of 27 credits from the following: 27

BA 101	Intro to Business
BA 178	Customer Service
BA 223	Marketing Principles I
CIS 125A	Access
CIS 125E	Excel
CIS 125G	Photoshop
or CIS 125V	Visio
CIS 197	CMS Web Development: WordPress
CIS 235	IT in Business
CIS 280	Co-op Work Experience CIS

**Other Required Courses**

Choose one course from the following: 3-4

BA 214	Business Communications
SP 111	Fundamentals Public Speaking
WR 122	Argument, Research and Multimodal Composition
WR 227	Technical Writing

Choose two courses from the Discipline Studies list (except 6-8  
CS prefix courses) or the recommended CIS electives list below.

Recommend: BA 101, BA 111, BA 112, BA 113, BA 177, BA 178, BA 206, BA 207, BA 211, BA 212, BA 213, BA 217, BA 218, BA 220, BA 222, BA 223, BA 224, BA 226, BA 228, BA 229, BA 239, BA 249, BA 250, BA 286

Human Relations approved course	3-4	
MTH 085	Technical Mathematics I (or higher)	3-4
or BA 104	Business Math	
WR 121	Academic Composition	4

**Total Credits 94-99**

**ADVISING NOTES**

Core courses are all offered two to three quarters each academic year. All CIS option courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

**Computer & Information Systems:  
Networking**  
Associate of Applied Science

**PROGRAM DESCRIPTION**

The Computer Information Systems (CIS) degree program is designed around a core curriculum and four distinct options. The program’s core provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations and writing. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator and related managerial and administrative roles.

The Networking option prepares students for entry-level positions in network administration. Network specialists have the ability to design, create, manage and maintain computer networks for small businesses. Courses cover both hardware and software and closely follow major industry certification requirements.

**PROGRAM COSTS**

(beyond standard tuition/fees and textbooks)

**Material Costs**

- (8-32 GB usb/flash drive, basic office supplies, notebooks), \$100
- Recommended: a home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

**Enrollment Fees**

- \$10 per credit for online courses

**PROGRAM ENTRANCE REQUIREMENTS**

**Academic Entrance Requirements**

- Recommended:
  - High school diploma or GED
  - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric/Critical Thinking II/WR 095 Basic Writing II (“C” or better)

- Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Algebra I equivalent
- Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Intro to Computers: Windows)

### PROGRAM PERFORMANCE STANDARDS

#### Academic Requirements

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

#### Additional Requirements

- All COCC students enrolled in the Computer Information Systems program (which includes requirements for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

### PROGRAM COURSE REQUIREMENTS

#### Core Courses

CIS 120	Computer Concepts	4
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
CIS 297	CIS Professional Capstone	4

#### Networking Option

Choose a minimum of 27 credits from the following:	27	
CIS 151C	Cisco Internetworking	
CIS 152C	Cisco Router Configuration	
CIS 154C	Cisco VLAN and WAN Technologies	
CIS 279L	Linux+	
CIS 279SC	Windows Server Configuration	
CIS 279SE	Security+	
CIS 279SM	Windows Server Management	
CIS 279SS	Windows Server Services	
CIS 280	Co-op Work Experience CIS	
CIS 284	Cisco CCNA Security	
CIS 284EH	Ethical Hacking	

#### Other Required Courses

Choose one course from the following:	3-4	
BA 214	Business Communications	
SP 111	Fundamentals Public Speaking	
WR 122	Argument, Research and Multimodal Composition	
WR 227	Technical Writing	
Choose two courses from the Discipline Studies list (except CS prefix courses) or the recommended CIS electives list below. Recommend: BA 101, BA 111, BA 112, BA 113, BA 177, BA 178, BA 206, BA 207, BA 211, BA 212, BA 213, BA 217, BA 218, BA 220, BA 222, BA 223, BA 224, BA 226, BA 228, BA 229, BA 239, BA 249, BA 250, BA 286	6-8	
Human Relations approved course	3-4	
MTH 085 or BA 104	Technical Mathematics I (or higher) Business Math	3-4
WR 121	Academic Composition	4
<b>Total Credits 94-99</b>		

### ADVISING NOTES

Core courses are all offered two to three quarters each academic year. All CIS option courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

## Computer & Information Systems: Web Development Associate of Applied Science

### PROGRAM DESCRIPTION

The Computer Information Systems (CIS) degree program is designed around a core curriculum and four distinct options. The program's core provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations and writing. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator and related managerial and administrative roles.

The Web Development option prepares students for a career as a web developer or website administrator. These professionals are responsible for creating standards-based websites and web/database applications. In addition to programming skills in common markup, scripting and SQL languages, these types of professions require project management and communication skills.

### PROGRAM COSTS

(beyond standard tuition/fees and textbooks)

#### Material Costs

- (8-32 GB usb/flash drive, basic office supplies, notebooks), \$100
- Recommended: A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

#### Enrollment Fees

- \$10 per credit for online courses

### PROGRAM ENTRANCE REQUIREMENTS

#### Academic Entrance Requirements

- Recommended:
  - High school diploma or GED
  - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric/Critical Thinking II/WR 095 Basic Writing II ("C" or better)
  - Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Algebra I equivalent
  - Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Intro to Computers: Windows)

### PROGRAM PERFORMANCE STANDARDS

#### Academic Requirements

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

#### Additional Requirements

- All COCC students enrolled in the Computer Information Systems program (which includes requirements for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as

a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

**PROGRAM COURSE REQUIREMENTS**

**Core Courses**

CIS 120	Computer Concepts	4
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
CIS 297	CIS Professional Capstone	4

**Web Development Option**

Choose a minimum of 27 credits from the following:	27	
CIS 125G	Photoshop	
or CIS 125I	Adobe Illustrator	
CIS 125DV	Digital Video Productions	
or CIS 125WA	Web Animation	
CIS 133JS	Introduction to JavaScript	
CIS 133P	Introduction to PHP	
CIS 197	CMS Web Development: WordPress	
CIS 233P	Web Programming	
CIS 280	Co-op Work Experience CIS	
CIS 295	Web Development II	

**Other Required Courses**

Choose one course from the following:	3-4	
BA 214	Business Communications	
SP 111	Fundamentals Public Speaking	
WR 122	Argument, Research and Multimodal Composition	
WR 227	Technical Writing	
Choose two courses from the Discipline Studies list (except CS prefix courses) or the recommended CIS electives list below.	6-8	
Recommend: BA 101, BA 111, BA 112, BA 113, BA 177, BA 178, BA 206, BA 207, BA 211, BA 212, BA 213, BA 217, BA 218, BA 220, BA 222, BA 223, BA 224, BA 226, BA 228, BA 229, BA 239, BA 249, BA 250, BA 286		
Human Relations approved course	3-4	
MTH 085	Technical Mathematics I (or higher)	3-4
or BA 104	Business Math	
WR 121	Academic Composition	4

**Total Credits 94-99**

**ADVISING NOTES**

Core courses are all offered two to three quarters each academic year. All CIS option courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.