

INFORMATION TECHNOLOGY, ASSOCIATE IN APPLIED SCIENCE



COMPUTER AND INFORMATION TECHNOLOGY

Associate in Applied Science: AAS 3196

61-68 Credits

Program Contacts

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Program Description

The Associate in Applied Science (AAS) in Information Technology (IT) program is designed to provide students with skills to meet information technology needs across industries. This program includes instruction in the principles of computer hardware components and business software, programming, databases, networking, customer service, web development, and information systems and project management. Coursework helps prepare students for a variety of industry-recognized examinations and certifications. Students will earn one or more of the following Certificates of Completion (CCLs):

- CCL/5154 Cybersecurity Fundamentals
- CCL/5083 Database Development
- CCL/5043 Desktop Support
- CCL/5793 Foundations of Mobile App Development
- CCL/5132 Microsoft Office Professional
- CCL/5031 Microsoft System Administration
- CCL/5048 Programming and Systems Analysis Level I
- CCL/5183N Oracle Database Operations
- CCL/5050N Red Hat Linux Engineer
- CCL/5984 Web Foundations

Program Notes

CCL 5183N, and 5050N are not eligible for Title IV Federal Financial Aid.

Students must earn a grade of "C" or better in all courses required within the program. Overall program minimum GPA = 2.00.

Courses within any of the following prefixes must be taken within five (5) years prior to completion of the program to be applied toward this award: AIM, BPC, CIS, CLD, CNT, CSC, ITS, and MST.

++ indicates any suffixed course may be selected.

Program Requirements

Program Prerequisites: None

Required Courses: 33-41 Credits

Complete all courses in the specialization below that best aligns with your academic and professional goals. Consult with an academic, faculty, or program advisor.

Code	Title	Credits	Semester
FYE101	Introduction to College, Career and Personal Success	1-3	_____
or FYE103	Exploration of College, Career and Personal Success		_____

Specialization 1: Cybersecurity Fundamentals

Credits: 33-38

Code	Title	Credits	Semester
Information Technology Core			
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
MST150++	Any Microsoft Windows course		_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS156	Python Programming: Level I	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
Select one of the following:		3	_____
CIS224	Project Management Microsoft Project for Windows		_____
CIS250	Management of Information Systems ¹		_____
Cybersecurity Fundamentals			

CIS111	Ethics in Information Technology	3	_____
or ITS120	Legal, Ethical and Regulatory Issues		_____
CIS270	Essentials of Network and Information Security	3-6	_____
or CIS271DB & CIS272DB	Information Security Essentials and Information Security Principles		_____
or ITS110	Information Security Fundamentals		_____
ITS240	Ethical Hacking and Network Defense	3	_____

Related Area Credits _____

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology: _____

BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

¹ Students taking CIS271DB Information Security Essentials would be required to take CIS250 Management of Information Systems.

Specialization 2: Database Development

Credits: 36-38

Code	Title	Credits	Semester
Information Technology Core			
Select one of the following:		3	_____

BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
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CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____

CIS105	Survey of Computer Information Systems	3	_____
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CIS119DO	Introduction to Oracle: SQL	3	_____
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CIS133DA	Internet/Web Development Level I	3	_____
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Select one of the following: _____ 3 _____

CIS156	Python Programming: Level I		_____
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CIS162++	Any C Programming: Level I course		_____
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CIS163AA	Java Programming: Level I		_____
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CIS190	Introduction to Networking	3-4	_____
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or CNT140AB	Introduction to Networks		_____
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CIS224	Project Management Microsoft Project for Windows	3	_____
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or CIS250	Management of Information Systems		_____
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Database Development _____

CIS117DM	Microsoft Access: Database Management	3	_____
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or CIS154	Database Modeling and Design		_____
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CIS150++	Programming Fundamentals	3	_____
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Select one of the following: _____ 3 _____

CIS164AB	Oracle: PL/SQL Programming		_____
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CIS276DA	MySQL Database		_____
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CIS276DB	SQL Server Database		_____
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CIS217AM	Advanced Microsoft Access: Database Management	3	_____
or CIS276DB	SQL Server Database		_____
CIS225AB	Object-Oriented Analysis and Design	3	_____
Related Area Credits			
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-2	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 3: Desktop Support

Credits: 32-38

Code	Title	Credits	Semester
Information Technology Core			
BPC270	A+ Exam Prep: Operating System Configuration and Support	3	_____
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____

CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS126DL	Linux Operating System	3	_____
or CIS126RH	Red Hat System Administration I		_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals		_____
CIS156	Python Programming: Level I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Desktop Support			
BPC170	A+ Exam Prep: Computer Hardware Configuration and Support	3	_____
CIS102DA	Customer User Support	3	_____
Related Area Credits			
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		2-8	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____

CLD+++++	Any CLD Cloud Computing courses	_____
CNT+++++	Any CNT Cisco Network Technology courses	_____
ITS+++++	Any ITS Information Technology Security courses	_____
MST+++++	Any MST Microsoft Technology courses	_____

Specialization 4: Foundations of Mobile App Development

Credits: 33-38

Code	Title	Credits	Semester
Information Technology Core			
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support		_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management		_____
CIS119DO	Introduction to Oracle: SQL		_____
CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS162++	Any C Programming: Level I course	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____

CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____

Foundations of Mobile App Development

CIS120DF	Introduction to Adobe Photoshop	3	_____
CIS165	Introduction to IOS Application Development	3	_____
CIS165DA	Introduction to Android Application Development	3	_____
CIS165DB	C#/VB.NET: Windows 8 App Development	3	_____
or CIS165DC	Xamarin/C# Cross-Platform Development		_____

Related Area Credits

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:

BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 5: Microsoft Office Professional

Credits: 31-38

Code	Title	Credits	Semester
Information Technology Core			
CIS105	Survey of Computer Information Systems	3	
CIS117DM	Microsoft Access: Database Management	3	
CIS133DA	Internet/Web Development Level I	3	
Select one of the following:		3	
CIS150AB	Object-Oriented Programming Fundamentals		
CIS156	Python Programming: Level I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
Select one of the following:		3	
MST150++	Microsoft Windows		
BPC270	A+ Exam Prep: Operating System Configuration and Support		
Microsoft Office Professional			
Select one of the following:		0-1	
BPC/OAS111AA	Computer Keyboarding I		
or Permission from Program Director			
CIS113DE	Microsoft Word: Word Processing	3	
CIS114DE	Excel Spreadsheet	3	
CIS118DB	Desktop Presentation: PowerPoint	3	
CIS124AA & CIS124BA	Project Management Software: Level I and Project Management Software: Level II	2-3	

or CIS224 Project Management Microsoft Project for Windows _____

Related Area Credits _____

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology: 0-8 _____

BPC+++++ Any BPC Business-Personal Computers courses _____

CIS+++++ Any CIS Computer Information Systems courses _____

CLD+++++ Any CLD Cloud Computing courses _____

CNT+++++ Any CNT Cisco Network Technology courses _____

ITS+++++ Any ITS Information Technology Security courses _____

MST+++++ Any MST Microsoft Technology courses _____

Specialization 6: Microsoft Server

Credits: 36-38

Code	Title	Credits	Semester
Information Technology Core			
CIS105	Survey of Computer Information Systems	3	
Select one of the following:		3	
CIS117DM	Microsoft Access: Database Management		
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		
CIS133DA	Internet/Web Development Level I	3	
Select one of the following:		3	

CIS150AB	Object-Oriented Programming Fundamentals		
CIS156	Python Programming: Level I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS190 or CNT140AB	Introduction to Networking Introduction to Networks	3-4	
CIS224 or CIS250	Project Management Microsoft Project for Windows Management of Information Systems	3	
MST150++	Microsoft Windows	3	
Microsoft Server			
CIS121AH	Microsoft PowerShell/ Command Line Operations	3	
MST155DC	Installation, Storage, and Compute with Windows Server	4	
MST157DC	Networking with Windows Server	4	
MST158DC	Identity Management with Windows Server 2016	4	
Related Area Credits			
	Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:	0-2	
BPC+++++	Any BPC Business-Personal Computers courses		
CIS+++++	Any CIS Computer Information Systems courses		
CLD+++++	Any CLD Cloud Computing courses		

CNT+++++	Any CNT Cisco Network Technology courses		
ITS+++++	Any ITS Information Technology Security courses		
MST+++++	Any MST Microsoft Technology courses		

Specialization 7: Oracle Database Operations

Credits: 32-38

Code	Title	Credits	Semester
Information Technology Core			
Select one of the following:		3	
BPC270	A+ Exam Prep: Operating System Configuration and Support		
CIS126DL	Linux Operating System		
CIS126RH	Red Hat System Administration I		
MST150++	Microsoft Windows		
CIS105	Survey of Computer Information Systems	3	
CIS119DO	Introduction to Oracle: SQL	3	
CIS133DA	Internet/Web Development Level I	3	
Select one of the following:		3	
CIS150AB	Object-Oriented Programming Fundamentals		
CIS156	Python Programming: Level I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS190 or CNT140AB	Introduction to Networking Introduction to Networks	3-4	

CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____
Oracle Database Operations			
CIS119DP	Oracle: Database Administration	3	_____
CIS154	Database Modeling and Design	3	_____
CIS164AB	Oracle: PL/SQL Programming	3	_____
Related Area Credits			
Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		2-8	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____
CIS+++++	Any CIS Computer Information Systems courses		_____
CLD+++++	Any CLD Cloud Computing courses		_____
CNT+++++	Any CNT Cisco Network Technology courses		_____
ITS+++++	Any ITS Information Technology Security courses		_____
MST+++++	Any MST Microsoft Technology courses		_____

Specialization 8: Programming and Systems Analysis Level 1

Credits: 32-38

Code	Title	Credits	Semester
Information Technology Core			
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS119DO	Introduction to Oracle: SQL		_____

CIS276DA	MySQL Database		_____
CIS276DB	SQL Server Database		_____
Select one of the following:		3	_____
CIS126DL	Linux Operating System		_____
CIS126RH	Red Hat System Administration I		_____
MST150++	Microsoft Windows		_____
CIS133DA	Internet/Web Development Level I	3	_____
CIS150AB	Object-Oriented Programming Fundamentals	3	_____
CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks		_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems		_____

Programming and Systems Analysis

Select one of the following:		3	_____
CIS159	Visual Basic Programming I		_____
CIS162++	Any C Programming: Level I course		_____
CIS163AA	Java Programming: Level I		_____
CIS165++	Any Mobile Application Development course		_____
CIS166++	Any Web Scripting course	3	_____
GBS151	Introduction to Business	3	_____

Related Area Credits

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		1-8	_____
BPC+++++	Any BPC Business-Personal Computers courses		_____

CIS+++++	Any CIS Computer Information Systems courses	_____
CLD+++++	Any CLD Cloud Computing courses	_____
CNT+++++	Any CNT Cisco Network Technology courses	_____
ITS+++++	Any ITS Information Technology Security courses	_____
MST+++++	Any MST Microsoft Technology courses	_____

Specialization 9: Redhat Linux Engineer

Credits: 32-38

Code	Title	Credits	Semester
Information Technology Core			
CIS105	Survey of Computer Information Systems	3	_____
Select one of the following:		3	_____
CIS117DM	Microsoft Access: Database Management	_____	_____
CIS119DO	Introduction to Oracle: SQL	_____	_____
CIS276DA	MySQL Database	_____	_____
CIS276DB	SQL Server Database	_____	_____
CIS126RH	Red Hat System Administration I	3	_____
CIS133DA	Internet/Web Development Level I	3	_____
Select one of the following:		3	_____
CIS150AB	Object-Oriented Programming Fundamentals	_____	_____
CIS156	Python Programming: Level I	_____	_____
CIS162++	Any C Programming: Level I course	_____	_____
CIS163AA	Java Programming: Level I	_____	_____

CIS190	Introduction to Networking	3-4	_____
or CNT140AB	Introduction to Networks	_____	_____
CIS224	Project Management Microsoft Project for Windows	3	_____
or CIS250	Management of Information Systems	_____	_____

Redhat Linux Engineer

CIS238RH	Red Hat System Administration II	3	_____
CIS240RH	Red Hat System Administration III	3	_____

Related Area Credits

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:	5-11	_____
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BPC+++++	Any BPC Business-Personal Computers courses	_____
CIS+++++	Any CIS Computer Information Systems courses	_____
CLD+++++	Any CLD Cloud Computing courses	_____
CNT+++++	Any CNT Cisco Network Technology courses	_____
ITS+++++	Any ITS Information Technology Security courses	_____
MST+++++	Any MST Microsoft Technology courses	_____

Specialization 10: Web Foundations

Credits: 36-38

Code	Title	Credits	Semester
Information Technology Core			
Select one of the following:		3	_____
BPC270	A+ Exam Prep: Operating System Configuration and Support	_____	_____
CIS126DL	Linux Operating System	_____	_____

CIS126RH	Red Hat System Administration I		
MST150++	Microsoft Windows		
CIS105	Survey of Computer Information Systems	3	
Select one of the following:		3	
CIS117DM	Microsoft Access: Database Management		
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		
CIS133DA	Internet/Web Development Level I	3	
Select one of the following:		3	
CIS150AB	Object-Oriented Programming Fundamentals		
CIS156	Python Programming: Level I		
CIS162++	Any C Programming: Level I course		
CIS163AA	Java Programming: Level I		
CIS190	Introduction to Networking	3-4	
or CNT140AB	Introduction to Networks		
CIS224	Project Management Microsoft Project for Windows	3	
or CIS250	Management of Information Systems		
Web Foundation			
CIS120DF	Introduction to Adobe Photoshop	3	
CIS136	Content Management Systems: WordPress	3	
CIS166AA	Introduction to Javascript	3	
CIS233DA	Internet/Web Development Level II	3	
CIS235	E-Commerce	3	

Related Area Credits

Select courses with one of the following prefixes to complete a minimum of 60 credits for the Associate in Applied Science (AAS) in Information Technology:		0-2	
BPC+++++	Any BPC Business-Personal Computers courses		
CIS+++++	Any CIS Computer Information Systems courses		
CLD+++++	Any CLD Cloud Computing courses		
CNT+++++	Any CNT Cisco Network Technology courses		
ITS+++++	Any ITS Information Technology Security courses		
MST+++++	Any MST Microsoft Technology courses		

Specialization 11: A Related Certificate of Completion (CCL) At the Discretion of the Program Director

Credits: 32-33

A related Certificate of Completion (CCL) at the discretion of the Program Director (minimum of 11 credits) AND the following core courses with permission of the Program Director.

Code	Title	Credits	Semester
Information Technology Core			
CIS105	Survey of Computer Information Systems	3	
Select one of the following:		3	
CIS117DM	Microsoft Access: Database Management		
CIS119DO	Introduction to Oracle: SQL		
CIS276DA	MySQL Database		
CIS276DB	SQL Server Database		
Select one of the following:		3	

BPC270	A+ Exam Prep: Operating System Configuration and Support	_____
CIS126DL	Linux Operating System	_____
CIS126RH	Red Hat System Administration I	_____
MST150++	Microsoft Windows	_____
Select one of the following:		3
CIS150AB	Object-Oriented Programming Fundamentals	_____
CIS156	Python Programming: Level I	_____
CIS162++	Any C Programming: Level I course	_____
CIS163AA	Java Programming: Level I	_____
CIS190	Introduction to Networking	3-4
or CNT140AB	Introduction to Networks	_____
CIS133DA	Internet/Web Development Level I	3
CIS224	Project Management Microsoft Project for Windows	3
or CIS250	Management of Information Systems	_____

General Education

Code	Title	Credits	Semester
General Education			
Core			
<i>First-Year Composition</i>			
ENG101	First-Year Composition	3	_____
or ENG107	First-Year Composition for ESL	_____	_____
ENG102	First-Year Composition	3	_____
or ENG108	First-Year Composition for ESL	_____	_____
<i>Oral Communication</i>			
Select one of the following:		3	_____
COM100	Introduction to Human Communication	_____	_____
COM110	Interpersonal Communication	_____	_____
COM225	Public Speaking	_____	_____

COM230	Small Group Communication	_____
<i>Critical Reading</i>		_____
Select one of the following:		0-3
CRE101	College Critical Reading and Critical Thinking	_____
Or equivalent as indicated by assessment		_____
<i>Mathematics</i>		_____
Select one of the following:		3-6
MAT140	College Mathematics	_____
MAT141	College Mathematics	_____
MAT142	College Mathematics	_____
MAT145	College Mathematics with Review	_____
MAT146	College Mathematics with Review	_____
Equivalent or higher level mathematics course in the Mathematical Applications (MA) area		_____
Distribution		_____
<i>Humanities, Arts and Design</i>		_____
Any approved general education course(s) from the Humanities, Arts and Design (HU) area		3
<i>Social and Behavioral Sciences</i>		_____
Any approved general education course from the Social and Behavioral Sciences (SB) area		3
<i>Natural Sciences</i>		_____
Any approved general education course from the Natural Science (SG) or (SQ) area		4
Total Credits		22-28