

## Computer Information Science Degree (at a glance) – 61 hours

Course	Name	Theory	Lab	Total
ORT100	Orientation	1	0	1
This course is designed to introduce the beginning student to college. College policies and regulations are covered as well as stress management, resume preparation, job application procedures, and employment interviewing techniques.				
ENG101	English Composition I	3	0	3
<b>PREREQUISITE:</b> ENR 098 or appropriate English placement score. English Composition I provides instruction and practice in the writing of at least four extended compositions and the development of analytical and critical reading skills and basic reference and documentation skills in the composition process. English Composition I may include instruction and practice in library usage.				
MTH100	Intermediate College Algebra	3	0	3
<b>PREREQUISITE:</b> MTH 098 Elementary Algebra or appropriate mathematics placement score. <b>COREQUISITE:</b> MTH 099 Support for Intermediate College Algebra, if required. (Note that MTH 099 is required for students completing MTH 098 Elementary Algebra.) This course provides a study of algebraic concepts such as laws of exponents, polynomial operations, factoring polynomials, radical and rational expressions and equations and quadratic equations. Functions and relations are introduced and graphed. This course does not apply toward the general core requirement for mathematics.				
MTH116	Mathematical Applications	3	0	3
This course provides practical applications of mathematics and includes selected topics from consumer math, algebra, and geometry. The course covers integers, percent, interest, ratio and proportion, measurement systems, linear equations, and problem solving.				
PHL206	Ethics and Society	3	0	3
This course involves the study of ethical issues which confront individuals in the course of their daily lives. The focus is on the fundamental questions of right and wrong, of human rights, and of conflicting obligations. The student should be able to understand and be prepared to make decisions in life regarding ethical issues.				
PSY200	General Psychology	3	0	3
The course is a survey of the scientific study of psychological, biological, and socio-cultural factors that influence behavior and mental processes.				
CIS146	Microcomputer Applications	3	0	3
This course is an introduction to the most common microcomputer software applications. These software packages should include typical features of applications, such as word processing, spreadsheets, database management, and presentation software. Upon completion, s will be able to utilize selected features of these packages. <i>This course will help prepare s for the MOS and IC<sup>3</sup> certification. This course or an equivalent is CORE for the AAT and AAS CIS programs.</i>				
CIS115	Presentation Graphics Software Applications	3	0	3
This course provides s with hands-on experience using presentation graphics software. s will develop skills common to most presentation graphics software by developing a wide variety of presentations. Emphasis is on planning, developing, and editing functions associated with presentations.				
CIS117	Database Management Software Applications	3	0	3
This course provides s with hands-on experience using database management software. s will develop skills common to most database management software by developing a wide variety of databases. Emphasis is on planning, developing, and editing functions associated with database management.				
CIS149	Introduction to Computers	3	0	3
This course is an introduction to computers and their impact on society. The course covers the development of computers, their impact on society, as well as future implications of development of computer and related communication technologies. This course introduces programming and computer operating systems. Upon completion, students will have basic knowledge of computer technology and will be able to perform basic functions with a computer system. <i>The course will help prepare students for the IC<sup>3</sup> certification.</i>				
CIS161	Intro to Network Communications	3	0	3
This course is designed to introduce students to basic concepts of computer networks. Emphasis is placed on terminology and technology involved in implementing selected networked systems. The course covers various network models, topologies, communications protocols, transmission media, networking hardware and software, and network troubleshooting. Students gain hands-on experience in basic networking. <i>This course further helps prepare students for certification. NOTE: This course is a suitable substitute for CIS 199. Additionally, CISCO I may be used as a suitable substitute for this course. However, CIS 161 will not substitute for CISCO I.</i>				
CIS199	Network Communications	3	0	3
This course is designed to introduce students to the basic concepts of computer networks. Emphasis is placed on gaining an understanding of the terminology and technology involved in implementing networked systems. The course will cover the OSI and TCP/IP network models, communications protocols, transmission media, networking hardware and software, LANs (Local Area Networks) and WANs (Wide Area Networks), Client/Server technology, the Internet, Intranets and network troubleshooting. Upon completion of the course, students will be able to design and implement a computer network. Students will create network shares, user accounts, and install print devices while ensuring basic network security. They will receive hands-on experience building a mock network in the classroom. <i>This course will help prepare students for the CCNA and Network + certifications. This is a CORE course for the AAT, AAS CIS programs.</i>				
CIS207	Web Development	3	0	3
This course provides students with opportunities to learn Hypertext Markup Language, cascading style sheets, and Java Script. At the conclusion of this course, students will be able to use specified markup languages to develop basic Web pages.				
CIS249	Microcomputer Operating Systems	3	0	3
This course introduces microcomputer operating systems. Topics include a description of the operating system, system commands, and effective and efficient use of the microcomputer with aid of its system programs. Upon completion, students should understand the function and role operating systems, its operational characteristics, its configuration, how to execute programs, and efficient disk and file management.				
CIS268	Software Support	3	0	3
This course provides students with hands-on practical experience in installing computer software, operating systems, and trouble-shooting. <i>The class will help to prepare participants for the A+ Certification sponsored by CompTIA.</i> This course is a suitable substitute for CIS 239, Networking Software. This course supports CIP Code 11.0101.				

CIS269	Hardware Support	3	0	3
This course provides students with hands-on practical experience in installation and troubleshooting computer hardware. <i>The class will help to prepare participants for the A+ Certification sponsored by CompTIA.</i> This is a suitable substitute for CIS 240, Networking Hardware. This supports CIP Codes 11.0101.				
CIS275	Workstation Administration	3	0	3
This course provides a study of client system administration in a network environment. Topics include installing monitoring maintaining, and troubleshooting client operating system software and managing hardware devices and shared resources. Students gain hands-on experience in client operating system installation and basic administration of network workstations.				
CIS276	Server Administration	3	0	3
This course introduces network operating system administration. Topics included in this course are network operating system software installation, administration, monitoring, and maintenance; user, group, and computer account management; shared resource management; and server hardware management. Students gain hands-on experience in managing and maintaining a network operating system environment.				
CIS277	Network Services Administration	3	0	3
This course provides an introduction to the administration of fundamental networking services and protocols. Topics included in this course are implementing, managing, and maintaining essential network operating system services such as those for client address management, name resolution, security, routing, and remote access. Students gain hands-on experience performing common network infrastructure administrative tasks.				
CIS278	Directory Services Administration	3	0	3
This course provides a study of planning, implementing, and maintaining a network directory service. Topics included in this course are planning and implementing network directory organizational and administrative structures. Students gain hands-on experience using a directory service to manage user, group, and computer accounts, shared folders, network resources, and the user environment.				
CIS279	Network Infrastructure Design	3	0	3
This course provides a study of network infrastructure design. Topics included in this course are strategies for planning, implementing, and maintaining server availability and security, client addressing schemes, name resolution, routing, remote access, and network security. Students gain experience by designing plans for implementing common network infrastructure and protocols.				
CIS280	Network Security	3	0	3
This course provides a study of threats to network security and methods of securing a computer network from such threats. Topics included in this course are security risks, intrusion detection, and methods of securing authentication, network access, remote access, Web access, and wired and wireless network communications. Upon completion, students will be able to identify security risks and appropriate counter measures. <i>This course further helps prepare students for certification.</i>				

## Computer Information Science Degree by Semester (4 semesters)

### Fall Semester (First) – 16 hours

Course	Course	Theory	Lab	Total
ORT100	Orientation	1	0	1
This course is designed to introduce the beginning student to college. College policies and regulations are covered as well as stress management, resume preparation, job application procedures, and employment interviewing techniques.				
MTH100	Intermediate College Algebra	3	0	3
<b>PREREQUISITE:</b> MTH 098 Elementary Algebra or appropriate mathematics placement score. <b>COREQUISITE:</b> MTH 099 Support for Intermediate College Algebra, if required. (Note that MTH 099 is required for students completing MTH 098 Elementary Algebra.) This course provides a study of algebraic concepts such as laws of exponents, polynomial operations, factoring polynomials, radical and rational expressions and equations and quadratic equations. Functions and relations are introduced and graphed. This course does not apply toward the general core requirement for mathematics.				
CIS146	Microcomputer Applications	3	0	3
This course is an introduction to the most common microcomputer software applications. These software packages should include typical features of applications, such as word processing, spreadsheets, database management, and presentation software. Upon completion, s will be able to utilize selected features of these packages. <i>This course will help prepare s for the MOS and IC<sup>3</sup> certification. This course or an equivalent is CORE for the AAT and AAS CIS programs.</i>				
CIS115	Presentation Graphics Software Applications	3	0	3
This course provides s with hands-on experience using presentation graphics software. s will develop skills common to most presentation graphics software by developing a wide variety of presentations. Emphasis is on planning, developing, and editing functions associated with presentations.				
CIS149	Introduction to Computers	3	0	3
This course is an introduction to computers and their impact on society. The course covers the development of computers, their impact on society, as well as future implications of development of computer and related communication technologies. This course introduces programming and computer operating systems. Upon completion, students will have basic knowledge of computer technology and will be able to perform basic functions with a computer system. <i>The course will help prepare students for the IC<sup>3</sup> certification.</i>				
CIS249	Microcomputer Operating Systems	3	0	3
This course introduces microcomputer operating systems. Topics include a description of the operating system, system commands, and effective and efficient use of the microcomputer with aid of its system programs. Upon completion, students should understand the function and role operating systems, its operational characteristics, its configuration, how to execute programs, and efficient disk and file management.				

### Spring Semester (Second) – 18 hours

ENG101	English Composition I	3	0	3
<b>PREREQUISITE:</b> ENR 098 or appropriate English placement score. English Composition I provides instruction and practice in the writing of at least four extended compositions and the development of analytical and critical reading skills and basic reference and documentation skills in the composition process. English Composition I may include instruction and practice in library usage.				
MTH116	Mathematical Applications	3	0	3
This course provides practical applications of mathematics and includes selected topics from consumer math, algebra, and geometry. The course covers integers, percent, interest, ratio and proportion, measurement systems, linear equations, and problem solving.				
CIS207	Web Development	3	0	3
This course provides students with opportunities to learn Hypertext Markup Language, cascading style sheets, and Java Script. At the conclusion of this course, students will be able to use specified markup languages to develop basic Web pages.				
CIS268	Software Support	3	0	3
This course provides students with hands-on practical experience in installing computer software, operating systems, and trouble-shooting. <i>The class will help to prepare participants for the A+ Certification sponsored by CompTIA.</i> This course is a suitable substitute for CIS 239, Networking Software. This course supports CIP Code 11.0101.				
CIS269	Hardware Support	3	0	3
This course provides students with hands-on practical experience in installation and troubleshooting computer hardware. <i>The class will help to prepare participants for the A+ Certification sponsored by CompTIA.</i> This is a suitable substitute for CIS 240, Networking Hardware. This supports CIP Codes 11.0101.				
CIS161	Intro to Network Communications	3	0	3
This course is designed to introduce students to basic concepts of computer networks. Emphasis is placed on terminology and technology involved in implementing selected networked systems. The course covers various network models, topologies, communications protocols, transmission media, networking hardware and software, and network troubleshooting. Students gain hands-on experience in basic networking. <i>This course further helps prepare students for certification. NOTE: This course is a suitable substitute for CIS 199. Additionally, CISCO I may be used as a suitable substitute for this course. However, CIS 161 will not substitute for CISCO I.</i>				

### Summer Semester (Third) – 15 hours

PSY200	General Psychology	3	0	3
The course is a survey of the scientific study of psychological, biological, and socio-cultural factors that influence behavior and mental processes.				
CIS199	Network Communications	3	0	3
This course is designed to introduce students to the basic concepts of computer networks. Emphasis is placed on gaining an understanding of the terminology and technology involved in implementing networked systems. The course will cover the OSI and TCP/IP network models, communications protocols, transmission media, networking hardware and software, LANs (Local Area Networks) and WANs (Wide Area Networks), Client/Server technology, the Internet, Intranets and network troubleshooting. Upon completion of the course, students will be able to design and implement a computer network. Students will create network shares, user				

accounts, and install print devices while ensuring basic network security. They will receive hands-on experience building a mock network in the classroom. <i>This course will help prepare students for the CCNA and Network + certifications.</i> <b>This is a CORE course for the AAT, AAS CIS programs.</b>				
CIS277	Network Services Administration	3	0	3
This course provides an introduction to the administration of fundamental networking services and protocols. Topics included in this course are implementing, managing, and maintaining essential network operating system services such as those for client address management, name resolution, security, routing, and remote access. Students gain hands-on experience performing common network infrastructure administrative tasks.				
CIS279	Network Infrastructure Design	3	0	3
This course provides a study of network infrastructure design. Topics included in this course are strategies for planning, implementing, and maintaining server availability and security, client addressing schemes, name resolution, routing, remote access, and network security. Students gain experience by designing plans for implementing common network infrastructure and protocols.				
CIS280	Network Security	3	0	3
This course provides a study of threats to network security and methods of securing a computer network from such threats. Topics included in this course are security risks, intrusion detection, and methods of securing authentication, network access, remote access, Web access, and wired and wireless network communications. Upon completion, students will be able to identify security risks and appropriate counter measures. <i>This course further helps prepare students for certification.</i>				
<b>Fall Semester (Fourth) – 15 hours</b>				
PHL206	Ethics and Society	3	0	3
This course involves the study of ethical issues which confront individuals in the course of their daily lives. The focus is on the fundamental questions of right and wrong, of human rights, and of conflicting obligations. The student should be able to understand and be prepared to make decisions in life regarding ethical issues.				
CIS117	Database Management Software Applications	3	0	3
This course provides s with hands-on experience using database management software. s will develop skills common to most database management software by developing a wide variety of databases. Emphasis is on planning, developing, and editing functions associated with database management.				
CIS275	Workstation Administration	3	0	3
This course provides a study of client system administration in a network environment. Topics include installing monitoring maintaining, and troubleshooting client operating system software and managing hardware devices and shared resources. Students gain hands-on experience in client operating system installation and basic administration of network workstations.				
CIS276	Server Administration	3	0	3
This course introduces network operating system administration. Topics included in this course are network operating system software installation, administration, monitoring, and maintenance; user, group, and computer account management; shared resource management; and server hardware management. Students gain hands-on experience in managing and maintaining a network operating system environment.				
CIS278	Directory Services Administration	3	0	3
This course provides a study of planning, implementing, and maintaining a network directory service. Topics included in this course are planning and implementing network directory organizational and administrative structures. Students gain hands-on experience using a directory service to manage user, group, and computer accounts, shared folders, network resources, and the user environment.				

### Systems & Support – 16 semester hours/240 clock hours (3 possible industry certifications)

Course	Name	Theory	Lab	Total
ORT100	Orientation	1	0	1
This course is designed to introduce the beginning student to college. College policies and regulations are covered as well as stress management, resume preparation, job application procedures, and employment interviewing techniques.				
CIS146	Microcomputer Applications	3	0	3
This course is an introduction to the most common microcomputer software applications. These software packages should include typical features of applications, such as word processing, spreadsheets, database management, and presentation software. Upon completion, students will be able to utilize selected features of these packages. <i>This course will help prepare s for the MOS and IC<sup>3</sup> certification. This course or an equivalent is CORE for the AAT and AAS CIS programs.</i>				
CIS149	Introduction to Computers	3	0	3
This course is an introduction to computers and their impact on society. The course covers the development of computers, their impact on society, as well as future implications of development of computer and related communication technologies. This course introduces programming and computer operating systems. Upon completion, students will have basic knowledge of computer technology and will be able to perform basic functions with a computer system. <i>The course will help prepare students for the IC<sup>3</sup> certification.</i>				
CIS249	Microcomputer Operating Systems	3	0	3
This course introduces microcomputer operating systems. Topics include a description of the operating system, system commands, and effective and efficient use of the microcomputer with aid of its system programs. Upon completion, students should understand the function and role operating systems, its operational characteristics, its configuration, how to execute programs, and efficient disk and file management.				
CIS268	Software Support	3	0	3
This course provides students with hands-on practical experience in installing computer software, operating systems, and trouble-shooting. <i>The class will help to prepare participants for the A+ Certification sponsored by CompTIA.</i> This course is a suitable substitute for CIS 239, Networking Software. This course supports CIP Code 11.0101.				
CIS269	Hardware Support	3	0	3
This course provides students with hands-on practical experience in installation and troubleshooting computer hardware. <i>The class will help to prepare participants for the A+ Certification sponsored by CompTIA.</i> This is a suitable substitute for CIS 240, Networking Hardware. This supports CIP Codes 11.0101.				

### Access & Communication – 16 semester hours/240 clock hours (2 to 3 possible industry certifications)

Course	Name	Theory	Lab	Total
ORT100	Orientation	1	0	1
This course is designed to introduce the beginning student to college. College policies and regulations are covered as well as stress management, resume preparation, job application procedures, and employment interviewing techniques.				
CIS161	Intro to Network Communications	3	0	3
This course is designed to introduce students to basic concepts of computer networks. Emphasis is placed on terminology and technology involved in implementing selected networked systems. The course covers various network models, topologies, communications protocols, transmission media, networking hardware and software, and network troubleshooting. Students gain hands-on experience in basic networking. <i>This course further helps prepare students for certification. NOTE: This course is a suitable substitute for CIS 199. Additionally, CISCO I may be used as a suitable substitute for this course. However, CIS 161 will not substitute for CISCO I.</i>				
CIS199	Network Communications	3	0	3
This course is designed to introduce students to the basic concepts of computer networks. Emphasis is placed on gaining an understanding of the terminology and technology involved in implementing networked systems. The course will cover the OSI and TCP/IP network models, communications protocols, transmission media, networking hardware and software, LANs (Local Area Networks) and WANs (Wide Area Networks), Client/Server technology, the Internet, Intranet and network troubleshooting. Upon completion of the course, students will be able to design and implement a computer network. Students will create network shares, user accounts, and install print devices while ensuring basic network security. They will receive hands-on experience building a mock network in the classroom. <i>This course will help prepare students for the CCNA and Network + certifications. This is a CORE course for the AAT, AAS CIS programs.</i>				
CIS277	Network Services Administration	3	0	3
This course provides an introduction to the administration of fundamental networking services and protocols. Topics included in this course are implementing, managing, and maintaining essential network operating system services such as those for client address management, name resolution, security, routing, and remote access. Students gain hands-on experience performing common network infrastructure administrative tasks.				
CIS279	Network Infrastructure Design	3	0	3
This course provides a study of network infrastructure design. Topics included in this course are strategies for planning, implementing, and maintaining server availability and security, client addressing schemes, name resolution, routing, remote access, and network security. Students gain experience by designing plans for implementing common network infrastructure and protocols.				
CIS280	Network Security	3	0	3
This course provides a study of threats to network security and methods of securing a computer network from such threats. Topics included in this course are security risks, intrusion detection, and methods of securing authentication, network access, remote access, Web access, and wired and wireless network communications. Upon completion, students will be able to identify security risks and appropriate counter measures. <i>This course further helps prepare students for certification.</i>				

Administration & Application – 16 semester hours/240 clock hours (1 known industry certification)				
Course	Name	Theory	Lab	Total
ORT100	Orientation	1	0	1
This course is designed to introduce the beginning student to college. College policies and regulations are covered as well as stress management, resume preparation, job application procedures, and employment interviewing techniques.				
CIS146	Microcomputer Applications	3	0	3
This course is an introduction to the most common microcomputer software applications. These software packages should include typical features of applications, such as word processing, spreadsheets, database management, and presentation software. Upon completion, students will be able to utilize selected features of these packages. <i>This course will help prepare s for the MOS and IC<sup>3</sup> certification.</i> <b>This course or an equivalent is CORE for the AAT and AAS CIS programs.</b>				
CIS117	Database Management Software Applications	3	0	3
This course provides students with hands-on experience using database management software. Students will develop skills common to most database management software by developing a wide variety of databases. Emphasis is on planning, developing, and editing functions associated with database management.				
CIS275	Workstation Administration	3	0	3
This course provides a study of client system administration in a network environment. Topics include installing monitoring maintaining, and troubleshooting client operating system software and managing hardware devices and shared resources. Students gain hands-on experience in client operating system installation and basic administration of network workstations.				
CIS276	Server Administration	3	0	3
This course introduces network operating system administration. Topics included in this course are network operating system software installation, administration, monitoring, and maintenance; user, group, and computer account management; shared resource management; and server hardware management. Students gain hands-on experience in managing and maintaining a network operating system environment.				
CIS278	Directory Services Administration	3	0	3
This course provides a study of planning, implementing, and maintaining a network directory service. Topics included in this course are planning and implementing network directory organizational and administrative structures. Students gain hands-on experience using a directory service to manage user, group, and computer accounts, shared folders, network resources, and the user environment.				