



**COWLEY COLLEGE
& Area Vocational Technical School**

COURSE PROCEDURE FOR

**COMPTIA A+ PRACTICAL APPLICATIONS
CIS1757 3 Credit Hours**

Student Level:

This course is open to students on the college level in either the Freshman or Sophomore year.

Catalog Description:

CIS1757 – COMPTIA A+ PRACTICAL APPLICATIONS (3 hrs)

This course will prepare students for the supporting software portion of the CompTIA A+ certification. The topics will include support tools, installing windows, maintaining windows, troubleshooting windows issues/startup, network connection tools, mobile operating systems, security strategies, and virtualization.

Prerequisites:

None.

Co-requisites:

None

Controlling Purpose:

This course is designed to prepare students to support windows operating systems. These concepts provide a foundation for further courses involving support and debugging of operating system issues.

Learner Outcomes:

Upon completion of the course, the student will be able to install, maintain, and troubleshoot Windows operating systems. In addition, the student will use tools to troubleshoot performance, start-up, and networking issues. The student will learn basic virtualization techniques.

Units Outcomes and Clock Hours of Instruction for Core Curriculum:

The following outline defines the minimum core content not including the final examination period. Instructors may add other material as time allows.

Evaluation Key:

A = All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same field.

- B = All major goals have been achieved, but the student has failed to achieve some of the less important goals. However, the student has progressed to the point where the goals of work at the next level can be easily achieved.
- C = All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for taking more advanced work in the same field, but without any major handicap of inadequacy in his background.
- D = A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.
- F = Failing, will be computed in GPA and hours attempted.
- N = No instruction or training in this area.

UNIT 1: Survey of Windows Features and Support Tools						
Outcomes: Use various tools to explore the Windows file system and to support the system						
A	B	C	D	F	N	Demonstrate the ability to:
						Use Windows to interface with users, files and folders, applications, and hardware
						Use Windows tools to explore, examine, and support the system
						Make network connections using Windows
						Make network connections using Windows

UNIT 2: Installing Windows						
Outcomes: Perform an installation of windows along with the planning involved						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Plan a Windows installation
						Install Windows 10, Windows 8.1 and Windows 7
						Configure Windows settings after the installation
						Discuss special concerns when installing Windows in a large enterprise

UNIT 3: Maintaining Windows						
Outcomes: Explain how to schedule regular maintenance tasks, prepare for disaster recovery, and use commands to manage files and folders along with the hard drive						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Set up and perform scheduled preventive maintenance tasks to keep Windows healthy
						Prepare for disaster by keeping good backups of user data and Windows

						system files
						Use commands to manage files and folders and use Disk Management to manage hard drives

UNIT 4: Optimizing Windows						
Outcomes: Optimize a windows operating system to provide maximum performance						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Solve Windows problems using Windows utilities and tools
						Optimize Windows to improve performance
						Manually remove software

UNIT 5: Supporting Customers and Troubleshooting Windows						
Outcomes: Explain techniques of providing support to customers and use tools to troubleshoot application problems.						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Support customers in the nontechnical ways that they want and expect, beyond your technical skills
						Apply general strategies and steps to troubleshoot and solve any computer problem
						Troubleshoot application problems using appropriate Windows tools

UNIT 6: Troubleshooting Windows Startup						
Outcomes: Explain the boot process and troubleshoot startup problems						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Describe the boot process from the time you press the power button until the Windows Start screen or desktop loads
						Apply appropriate Windows tools to solve Windows startup problems
						Troubleshoot Windows startup problems

UNIT 7: Connecting To and Setting Up a Network						
Outcomes: Explain networking protocols and connect a computer to a small network along with configuring a router.						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Explain the TCP/ IP protocols and standards Windows uses for networking

						Connect a computer to a wired or wireless network
						Configure and secure a multifunction router on a local network

UNIT 8: Supporting Mobile Operating Systems						
Outcomes: Synchronize content on mobile devices to computers and storage on the cloud. In addition, use tools and resources to troubleshoot mobile operating systems						
A	B	C	D	F	N	Specific Competencies Demonstrate the ability to:
						Identify and use significant features of Android, iOS, and Windows mobile operating systems
						Configure, synchronize, and troubleshoot mobile devices that use iOS
						Configure, synchronize, and troubleshoot mobile devices that use Android
						Configure, synchronize, and troubleshoot mobile devices that use Android

UNIT 9: Windows Resources on a Network						
Outcomes: Use a network for client/server applications, sharing files and folders, and providing cloud computing services.						
A	B	C	D	F	N	Specific Competencies Demonstrate the ability to:
						Support some client/server applications
						Share and secure files and folders on a network
						Support cloud computing services on a network

UNIT 10: Security Strategies						
Outcomes: Use tools and techniques to secure resources on a computer, mobile device, and small network						
A	B	C	D	F	N	Specific Competencies Demonstrate the ability to:
						Secure a Windows personal computer
						Secure a mobile device
						Implement additional security techniques to protect a computer or SOHO network and its resources
						Recognize, remove, and protect personal computers against malicious software
						Recognize, remove, and protect mobile devices against malicious software
						Follow company policies to address issues of software copyright infringement and violations of prohibited content or activities

UNIT 11: Virtualization, Linux, and Mac OS X						
Outcomes: Create virtual machines/hypervisors and explain basic features of Linux and Mac OS X						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Implement and configure virtual machines and hypervisors
						Use various Linux commands to support applications and users
						Identify important features of Mac OS X

Projects Required:

Varies, refer to syllabus.

Textbook:

Contact Bookstore for current textbook.

Materials/Equipment Required:

None

Attendance Policy:

Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

Grading Policy:

The grading policy will be outlined by the instructor in the course syllabus.

Maximum class size:

Based on classroom occupancy

Course Time Frame:

The U.S. Department of Education, Higher Learning Commission and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching and assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

Refer to the following policies:

[402.00 Academic Code of Conduct](#)

[263.00 Student Appeal of Course Grades](#)

[403.00 Student Code of Conduct](#)

Disability Services Program:

Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability which may impact work in this class and which requires accommodations, contact the Disability Services Coordinator.