

Career & Technical Education				
College Name:		Shawnee Community College		
Academic Years Reviewed:		2017-2021		
Program Identification Information				
Program Title	Degree or Cert	Total Credit Hours	6-Digit CIP Code	List all certificate programs that are stackable within the parent degree
COM 2221 Computer Systems and Security Specialist	Degree	65	110103	COM 2182 Internet and Computing Core Prep COM 2183 Microsoft Office Specialist
Address all fields in the template. If there are certificates and/or other stackable credentials within the program, please be sure to specify and sufficiently address all questions regarding each stackable credential within this template or results may be reported within its own template. This is at the discretion of the college.				
Program Objectives What are the overarching objectives of the program? (<i>i.e. what are the program learning outcomes? What occupations is this program intended to prepare students for?</i>)		The Computer Systems & Security Specialist AAS degree prepares students for entry level careers in business productivity, marketing, network technologies and digital defense. The learning objectives for this program are: <ol style="list-style-type: none"> 1. Students will demonstrate knowledge of business productivity software including word processing, spreadsheet, database management, presentation graphics, and web technologies. 2. Students will demonstrate the knowledge needed to configure and operate a variety of networking projects involving a wide range of vendor and product neutral networking technologies and computer hardware. 3. Student will demonstrate knowledge of how to properly conduct a computer forensic investigation utilizing computer forensics tools and procedures. 		
To what extent are these objectives being achieved? Please detail how achievement of program objectives is being measured or assessed. How do you know if and how objectives are being achieved? <i>This may include employment rates of graduates, passing exam/licensure rates, assessment of students meeting</i>		Each year the department completes a Continuous Quality Improvement (CQI) assessment of its overarching program objectives. The CQI indicates the program is meeting the current objectives; however, for students to be able to compete for top-industry jobs in IT, and Security, a significant modification of this program is needed.		

<i>Program Learning Outcomes, etc.)</i>	
Past Program Review Action What action was reported last time the program was reviewed? Were these actions completed?	Past program review action was to continue with minor improvements.
Review Team Please identify the names and titles of faculty and staff who were major participants in the review of this program. Also describe their role or engagement in this process.	<ul style="list-style-type: none"> • Phyllis Sander is the former instructor for the program and was responsible for program management, curriculum development, and instruction. • Ruth Smith, Career & Technology Department Chair is responsible for tasks supporting the quality of instruction, compliance with ICCB requirements, and assessment of student learning outcomes. • Dr. Gregory Mason is the Dean of Career & Technology Programs and provides overall administrative oversight.
Stakeholder Engagement Please list other stakeholders and participants who were engaged in this process (i.e. Student Support Services, students, employers, etc.) Also describe their role or engagement in this process.	<ul style="list-style-type: none"> • Bi-annual Advisory Council meetings are held with instructors, employers, graduates, and current students to discuss curriculum content, equipment, and employment opportunities. • Student Success Services – Support services for tutoring, advising, and career counseling • Shawnee Development Council - Local WIOA office providing qualified students with support for tuition, books, and tools.
CTE Program Review Analysis Complete the following fields and provide concise information where applicable. Please do not insert full data sets but summarize the data to completely answer the questions. Concise tables displaying this data may be attached. The review will be sent back if any of the below fields are left empty or inadequate information is provided.	
Were pre-requisites for this program (courses, placement scores, etc.) analyzed as part of this review? If yes, please elaborate on any findings or revisions moving forward.	The program requires no pre-requisites for entry. Multiple measures placement is used for math and English placement.
Provide a rationale for content/credit hours beyond 30 hours for a certificate or 60 hours for a degree.	The Computer Systems & Security Specialist program is the result of the merging of the Computer Information System General Specialist and Cyber Security programs. The Computer Systems & Security Specialist program offers students greater opportunity for direct entry into the workforce and/or for transfer to a 4-year program. For the students to be sufficiently prepared for employment, the core courses for each of the combined programs are required, necessitating the additional hours. During the 2021-22 Advisory Council meetings, representatives from regional universities suggested some changes that, if implemented, would potentially decrease the maximum number of credit hours required for the program.

Indicator 1: Need	Response
<p>1.1 What is the labor market demand for the program? Cite local and regional labor market information.</p>	<p>Demand on the federal level is steady in the program area. United States Bureau of Labor Statistics (BLS) projects a 7% growth pattern from 2020-2030 which is the average for all occupations.</p> <p>Data from the Illinois Department of Employment Security indicate Regions LWIA 25 and 26 Occupations Projections estimate a 2.81% decline in occupational demand between 2018 and 2028 in southern Illinois.</p>
<p>1.2 How has demand changed in the past five years and what is the outlook for the next five years?</p>	<p>The decline in occupational demand in the LWIA 25 and 26 regions is due to a lack of local employers and a decline in population in the region. The outlook for the occupation remains strong in neighboring Western Kentucky and Southeast Missouri with the reporting anticipated job growth more consistent with the national average.</p>
<p>1.3 What labor market information sources are utilized and how often are LMI data reviewed?</p>	<p>LMI data is reviewed annually by the program faculty, dean of the division, and the Office of Institutional Research. LMI data is shared with Advisory Committee members bi-annually. LMI sources include:</p> <ul style="list-style-type: none"> • United States Bureau of Labor Statistics 2020-2030 employment projections • Illinois Department of Employment Security LWIA 25 and 26 Occupations Projections • KY Center for Statistics, Occupations Projections • MO Economic Research & Information Center, Occupations Projections
<p>1.4 How does the institution/program ensure that there is a sufficient “pipeline” or enrollment of students to fulfill the labor market need? (e.g. how/where are students recruited for this program?)</p>	<p>Shawnee Community College recruits across its 5-county district of Southern Illinois (Alexander, Johnson, Massac, Pulaski, and Union counties). Students are recruited through Shawnee Community College community events, newspaper and print materials, Career Tech Day, Shawnee Experience, and various other recruiting events</p>
<p>1.5 How are needs/changes evaluated by the curriculum review committee and campus academic leadership?</p>	<p>Computer Technology instructors identify actual or potential needs. These needs are discussed with the department chair and the dean of the division. If approved, changes are presented to the Curriculum and Instruction committee for approval or requests for additional information. Once the Curriculum and Instruction committee approves the changes, the changes are sent to ICCB as required and then submitted for inclusion into the college catalog.</p>

1.6 Did the review of program need result in actions or modifications (e.g. closing the program, expanded industry partnerships, revised recruitment, reducing/expanding program offerings)? Please explain.

The current Computer Systems & Security Specialist program is the result of merging the Computer Information System General Specialist and Cyber Security programs due to declining enrollment in those programs. The Computer Systems & Security Specialist program is intended to better prepare students for direct entry into the workforce and/or for articulation into a 4-year program and be more cost-effective for SCC.

Indicator 2:
Cost Effectiveness (see ICCB and system resources for cost-effectiveness:
https://www.iccb.org/academic_affairs/program-review/)

Response

.1 How does the institution assess cost-effectiveness for CTE programming? Consider:

- Costs to the institution associated with this program
- How costs compare to other similar programs on campus
- How the college is paying for this program and its costs (e.g. grants, tuition, fees (lab, technology, background checks, etc.).
- Revenue Analysis
- Student to faculty ratio
- Course/section fill rates
- Enrollment trends
- Credit hours earned year to year
- Scheduling efficiency

The Business, Occupational and Technical (BOT) Department had many overlapping computer programs and faculty members. All cost associated with these programs were tied to one cost center in the college’s previous system. Now each program is its own cost-center. As a result of the cost review, two full-time faculty positions were eliminated, and other computer programs were eliminated or merged. Cost associated with this program are salaries, benefits, supplies, copiers, and certifications.

The average five-year direct cost per student is \$542.23. The cost of operating this program in comparison to other programs does not currently make it cost effective.

The program is funded by SCC through three primary sources: local property tax, state funding, and tuition and fees

The student to faculty ratio is 1:14 with three full-time instructors

Number of Credit Hours by AY

	2018	2019	2020	2021	2022	Sum:
COM-0101	21	6	7			34
COM-0111	380	420	472	392	328	1992
COM-0133	14		16		10	40
COM-0189	18	12		15	12	57
COM-0190	10	9	9			28
COM-0196	8		4	2	4	18
COM-0201	9	4	9	3	5	30
COM-0218			18		6	24
COM-0222	12	9	18		18	57
COM-0225	15	9		15	9	48
COM-0227	3		18		3	24
COM-0231			9	3	6	18
COM-0239	12		15	3		30

	COM-0241			24			24
	COM-0244			36		6	42
	COM-0245				6		6
	COM-0246		12	3			15
	COM-0265	10	4	12		8	34
	COM-0280		20			6	26
	COM-0281	30	30	4	8	14	86
	COM-0283	4	8	2		4	18
	Sum:	546	543	676	447	439	2651
.2 What are the findings of the cost-effectiveness analysis?	Currently the cost of operating this program and the low enrollment in comparison to other programs does not make it cost effective.						
2.3 If most of the costs are offset by grant funding, is there a sustainability plan in place in the absence of an outside funding source? Please explain.	Grant funding is not a factor in the program's cost-effectiveness analysis. This program of study is fully institutionally funded.						
2.4 How does the institution/program assess student affordability for this program? (Consider if program costs are reasonable, comparable to like programs) How does the institution/ program assist students in overcoming financial barriers to participate in this program? (e.g. WIOA, Ability-to-Benefit, scholarships, grant funding, referral to services, apprenticeship programming)	<ul style="list-style-type: none"> • The institution assesses student affordability for the program by comparing program costs of similar programs offered by other regional institutions. • The institution assists students in overcoming financial barriers to participate in this program by offering institutional scholarships, grant funding, and WIOA financial support (for eligible students). 						
2.5 How will the college increase the cost- effectiveness of this program?	The college is considering revamping the program to make it more reflective of industry needs, provide greater opportunity for short-term, stackable credentials and offer more work-based learning.						
2.6 Did the review of program cost result in any actions or modifications? Please explain.	There have been no modifications to the program.						
Indicator 3: Quality	Response						

<p>3.1 What are the delivery methods of this program? (e.g. traditional format/online/hybrid/team-teaching/ competency-based education, etc.)?</p> <p>How do the success rates of each delivery system compare?</p>	<p>Course content is delivered through a traditional format of Face-to-face instruction, on-line, or in a hybrid format. Student learning is reinforced through student mastery of learning objectives as demonstrated through completion of reading assignments, class participation, performance of hands-on activities, and satisfactory completion of daily quizzes, exams, and a comprehensive final.</p> <p>Course modality vs. success rate is a performance indicator measured in the college’s Strategic Plan. Data is readily available to faculty and administrators in the form of a data dashboard developed by the Office of Institutional Effectiveness.</p>
<p>3.2 How does the program ensure that quality, relevant, contextualized, and culturally responsive instruction is delivered?</p>	<p>The college seeks to promote culturally responsive instruction within the curriculum by including information related to multiculturalism in numerous identified courses. The college’s Human Resources department offers Diversity, Equity and Inclusion training opportunities to faculty and staff throughout the year.</p>
<p>3.3 Is this program part of a Program of Study as defined by Perkins V and approved by the ICCB?</p> <p>If yes, describe any strengths or challenge to program of study implementation.</p>	<p>The Computer Systems & Security Specialist Associate of Applied Science (65-hour) program is approved by the ICCB and is awaiting the official certification of the program of study for Perkins V.</p> <p>The strength of the program is in its preparation of students for multiple career opportunities in business productivity, marketing, network technologies, and digital defense. The current full-time instructors have varied specialties that bring necessary strengths to the content delivery of all courses.</p> <p>Another strength is that students can become qualified to sit for multiple certification tests (Security+ and A+) before the degree is completed. The computer forensic curriculum maps directly to the objectives of the International Association of Computer Investigative Specialists (IACIS) certification allowing students to enter immediately into the workforce and/or matriculate to a 4-year institution.</p> <p>Challenges to program of study implementation:</p> <ul style="list-style-type: none"> • The curriculum guide needs to be updated to better reflect the current industry trends. • Insufficient enrollment in the program to meet the employment needs of local businesses. • Insufficient enrollment in the program to sustain it as a viable college program.
<p>3.4 Does this program meet the definition of a career pathway program? If so, please describe each career pathway element and identify how the college plans to improve the program as it relates to the</p>	<p>The Computer Systems & Security Specialist Associate of Applied Science is aligned with the Science, Technology, Engineering and Mathematics: Engineering and Technology Career Pathway Plan of Study. To strengthen alignment with this pathway the College is exploring expanding dual credit options with more high schools and development of more work-based</p>

<p>career pathway system elements. Examples include connections to adult education including integrated education and training, prior learning assessment, dual credit, support services, career services). If no, please describe if and how the college will improve the program based on the career pathway elements.</p>	<p>learning opportunities.</p>										
<p>3.5 What innovations, that contribute to quality or academic success, have been implemented within this program that other colleges would want to learn about?</p>	<p>Many of the courses are offered in the online format. Some are offered in a hybrid format. This has created an opportunity to attract more non-traditional students to the program who may not be able or interested in attending classes on campus. The program has also been identified as a Capstone program with Southern Illinois University-Carbondale</p>										
<p>3.6 Describe dual credit implementation for this program (generally how many students, courses, participating high schools). In terms of strengthening the program, what dual credit courses are seen as a priority?</p>	<p>This program offers dual credit opportunities in general education courses and a "core" class (COM 111) at the following schools:</p> <table border="1" data-bbox="716 930 1427 1194"> <thead> <tr> <th data-bbox="716 930 1105 968">High School</th> <th data-bbox="1105 930 1427 968">SCC Course Prefix</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 968 1105 1008">Goreville and Vienna</td> <td data-bbox="1105 968 1427 1008">COM 111</td> </tr> <tr> <td data-bbox="716 1008 1105 1119">Century, Dongola, Egyptian, Goreville, Joppa, Massac, Shawnee, Vienna</td> <td data-bbox="1105 1008 1427 1119">ENG 111</td> </tr> <tr> <td data-bbox="716 1119 1105 1159">Century, Cairo, Cobden</td> <td data-bbox="1105 1119 1427 1159">PSY 211</td> </tr> <tr> <td data-bbox="716 1159 1105 1194">Egyptian</td> <td data-bbox="1105 1159 1427 1194">SPC 111</td> </tr> </tbody> </table>	High School	SCC Course Prefix	Goreville and Vienna	COM 111	Century, Dongola, Egyptian, Goreville, Joppa, Massac, Shawnee, Vienna	ENG 111	Century, Cairo, Cobden	PSY 211	Egyptian	SPC 111
High School	SCC Course Prefix										
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Egyptian	SPC 111										
<p>3.7 Identify what work-based learning opportunities are available and integrated into the curriculum.</p> <p>How do these opportunities improve the quality of the program? In what ways can these opportunities be improved?</p>	<p>An internship is required as part of the program, which allows the students to gain profession-specific experience for the application of skills learned in the classroom. Expansion of work-based learning opportunities helps students gain valuable experience and insight into their career pathway. However, the number of local employers able to host an intern is limited.</p>										
<p>3.8 Is industry accreditation required for this program (e.g. nursing)? If so, identify the accrediting body. Please also list if the college has chosen to voluntarily seek accreditation (e.g. automotive technology, ASE).</p>	<p>There is no industry accreditation required for this program of study.</p>										
<p>3.9 Are there industry-recognized credentials embedded within this program? If so, please list.</p>	<p>Students can receive the Security+ and A+ certifications as part of this program.</p>										

3.10 Are there apprenticeship opportunities available through this program? If so, please elaborate.	There is no apprenticeship offered for this program of study.
3.11 Please list all applicable licensure and industry/professional examinations. Include examination pass rates and the number of students who took each respective exam.	The data regarding industry certification, examination pass rates and the number of students taking the exams is not yet available.
3.12 What current articulation or cooperative agreements/initiatives are in place for this program?	Southern Illinois University Carbondale
3.13 Have partnerships been formed since the last review that may increase the quality of the program and its courses? If so, with whom? What opportunities exist for other partnerships?	There have not been any new partnerships formed since the last review.
3.14 What partnerships (internal or external) have been formed for the advancement of equitable access and outcomes for this program?	Equitable access is given to students by offering dual credit and dual enrollment opportunities. Bi-annual meetings of the program advisory council are used to help update curriculum/course materials and student learning outcomes and create student awareness of career opportunities offered by industry partners.
3.15 What professional development or training is offered to adjunct and full-time faculty that may increase the quality of this program? What additional professional development is needed?	Frequent webinars are made known to all faculty to allow for participation. Full-time faculty meet with all adjuncts for a minimum of two times per academic year to provide information and training. Institutional funds and funds available through Perkins and other grants support faculty attendance at conferences and workshops for program development. Training sessions on the college's Learning Management System, Assessment and Outcomes, and Continuous Quality Improvement are provided throughout the academic year. Full-time faculty meet with all adjunct instructors for a minimum of two times per academic year to provide information, training, and other related professional development but is voluntary. A more standardized training program for adjuncts needs to be developed.
3.16 What professional development is provided for faculty and staff in this program on Diversity, Equity, and Inclusion?	The college's Human Resources Office offers Diversity, Equity and Inclusion training opportunities throughout the year.

3.17 What is the status of the current technology and equipment used for this program?	The program makes use of five computer labs on campus. At least one lab is upgraded per academic year with new hardware and software.
3.18 What assessment methods are used to ensure student success?	<p>Assessment of the college's core competencies in communication, problem solving, personal growth and responsibility, and research and information literacy is achieved by various methods:</p> <ul style="list-style-type: none"> • Hands-on evaluation of application • Exams • Oral presentations • Projects • Group learning
3.19 How are these results utilized and shared with others at the institution for continuous improvement?	The results for college wide CQI are presented annually to faculty and administration for review.
3.20 What curriculum revisions to improve program quality and learning outcomes have been made based on the assessment of student learning? (How do you use the information gained from the assessment to improve your program and students learning?)	No revisions to the curriculum have been made at this time but the college is considering revamping the program to provide greater opportunity for short-term stackable credentials and work-based learning that will attract more students, and be more responsive to employer needs as the IT field continues to evolve.
<p>3.21 How satisfied are students with their preparation for employment?</p> <p>How is this student satisfaction information collected?</p>	<p>Interviews of previous students who are currently employed and employer feedback indicates that they are generally satisfied but feel the program needs to become more current in its curriculum.</p> <p>Student satisfaction information is officially collected from CCSSE surveys and Noel-Levitz surveys. Informal assessment happens continuously throughout the year as a result of student interactions in the classroom, during one-on-one advising, student feedback solicited during bi-annual Advisory Committee meetings.</p>
3.22 How does the program advisory committee contribute to the quality of the program? How can this engagement be improved?	The program advisory committee meets bi-annually to discuss curriculum design, completions, placement, and potential work-based learning opportunities.
3.23 In what other ways are employers engaged in this program? (e.g. curriculum design, review, placement, work-based learning opportunities)	Employers are actively engaged for their input on the program's curriculum design, completions, placement, and potential work-based learning opportunities. Also, if a student participates in a paid internship, that employer completes bi-semester evaluations of the student.

3.24 How satisfied are employers in the preparation of the program's graduates? How is employer satisfaction information collected?	Employers are surveyed during the bi-annual meetings and have expressed an overall satisfaction with the level of student preparation. However, they have indicated that there is a need for revisions to the curriculum to attract more students to the program and meet industry workforce needs.
3.25 What are the program's strengths?	The program allows students to earn stackable credentials to strengthen their workforce opportunities. Students also receive exposure to a wide variety of software applications and computer technologies.
3.26 What are the identified or potential weaknesses of the program?	A combination of declining district population and limited local career opportunities has led to lower enrollment in the program.
3.27 Did the review of program quality result in any actions or modifications? Please explain.	The review of the program determined that the level of quality was sufficient, but improvements should be made to make it more reflective of industry needs, provide greater opportunity for short-term stackable credentials and offer more work-based learning.

List any additional barriers encountered while implementing the program not detailed above. Please consider the following: retention, placement, support services, course sequencing, etc.

Performance and Equity					
Please complete for each program reviewed. Colleges may report aggregated data from the parent program or report on enrollment and completion data individually for each certificate within the program. Provide the most recent 5-year longitudinal data available. Each year may represent a cohort.					
CTE Program	Computer Systems and Security Specialist AAS				
CIP Code	110103				
	2018	2019	2019	2020	2021
Number of Students Enrolled	15	12	18	11	9
Number of Completers	4	1	0	3	2
Other (Please identify)					

What disaggregated data was reviewed?
 If program enrollment is low, programs may disaggregate data at the department or discipline level. Disaggregated may include, but is not limited to race, ethnicity, gender, age, part-time/full-time status.

It may also be appropriate to analyze intersectionality among student demographics (e.g. gender & race, special population status & race, etc.)

In addition to program enrollment and completions, COM 2221 enrollment was subdivided by race/ethnicity and district enrollment. That data was then cross referenced with the same demographic information for the entire college.

Enrollment

		2018	2019	2020	2021	2022
Computer System & Security Spec.	American Indian					
	Black or African American	2	1	4	1	1
	Hispanic	1	1	1	1	1
	Two or More Races	1		1		
	White	11	10	12	9	7
	Sum:	15	12	18	11	9

Enrollment and Completions by County

County	Enrollment	Completers
Alexander	9%	1.8 %
Johnson	11%	0%
Massac	27%	3.5%
Pulaski	9%	0%
Union	37.5%	63.4%
Other	7%	0%

How does the data support the program goals?
 Elaborate.

This data is representative of what we discovered in the review process and of already implemented changes. There were too many computer options and students had no direct path to employment. The program was streamlined by the closure and merging of two other IT programs.

Were there gaps in the data (equity gaps, enrollment gaps, retention gaps, success gaps, etc.)? Please explain.

The largest data gap comes in terms of not tracking demographic data such as age, financial need and transfer rates for program enrollment.

What is the college doing to overcome any identified gaps? If nothing is currently being done, explain what the college plans to do to

At this time the college is taking steps to review all data for all programs including the gaps mentioned above.

close identified gaps.	
Are the students served in this program representative of the total student population? Please explain.	According to the disaggregated data, the students in this program have a greater proportion of males (74%) than the college student population which is approximately 35 percent male and 65 percent female.
Are the students served in this program representative of the district population? Please explain.	No. The students in this program have a greater proportion of males enrolled than is representative of the district population which is approximately 50% female.
Review Results	
Action	<input type="checkbox"/> Continued with Minor Improvements <input checked="" type="checkbox"/> Significantly Modified <input type="checkbox"/> Placed on Inactive Status <input type="checkbox"/> Discontinued/Eliminated <input type="checkbox"/> Other (please specify)
Summary Rationale Please provide a brief rationale for the chosen action.	The program will focus on becoming more aligned with the Science, Technology, Engineering and Mathematics: Engineering and Technology Career Pathway Plan of Study. To strengthen the alignment the College will explore expanding dual credit options with more high schools and development of more work-based learning opportunities.
Intended Action Steps What are the action steps resulting from this review? Please detail a timeline and/or dates for each step.	College will recruit and hire full-time faculty with the industry and academic credentials necessary to review the current curriculum and recommend any revisions – Spring 2023
Program Objectives If program objectives are not being met, what action steps will be taken to achieve program objectives?	Program objectives are being met.
Performance and Equity To what extent are action steps being implemented to address equity gaps, including racial equity gaps?	The College has an open- admissions policy, thus providing educational, economic, and community service opportunities to all, regardless of race, sex, religion, ethnic origin, marital status, disability, or socioeconomic level.
Resources Needed	The program requires periodic updates to equipment and software that reflect improvements in technology and regular review of curriculum to maintain alignment with industry standards and area workforce needs.

Responsibility Who is responsible for completing or implementing the modifications?	The division dean, department chair and program faculty are responsible for completing or implementing any modifications.
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