EASTERN WEST VIRGINIA COMMUNITY AND TECHNICAL COLLEGE

DISCOVER YOUR POTENTIAL

Program Review

Program Name: Computer Applications Specialist

Degree or Certificate: Certificate in Applied Science

Chair/Director: Seyed Mirkhani

Submitted by: Seyed Mirkhani

Date Submitted: 03/17/2023

Assessment Committee Approval: 03/23/2023

LOT Committee Approval: 03/27/2023

Cabinet Approval: 04/12/2023

Board of Governors Approval: 04/19/2023

Section I: Overview of Program

A. Program Description:

The Computer Applications Specialist Certificate in Applied Science was developed in 2009 to serve employers in Eastern's district. The Computer Applications Specialist Certificate in Applied Science provides training with a focus on the practical aspect of computer applications and practices. The program includes several courses in Computer Information Systems, Communication, Information Technology, Mathematics and Business Management. Computer Applications Specialists are employed nationally in numerous diverse industries. Locally, this program addresses the labor demands of many organizations including federal and state organizations, educational institutions, manufacturers, health-related establishments, and other service organizations. Examples of entry-level positions Eastern graduates are qualified for include administrative and technical support, document processing, customer service, and data entry.

B. List the Program Learning Outcomes:

1. Demonstrate a basic knowledge of business organization and procedures by applying business applications of computers
2. Demonstrate knowledge regarding computer information systems
3. Design and manage a database
4. Design an interactive website
5. Analyze and present data in a virtual format
6. Apply computer skills to create, analyze, and assess a business document to solve an organizational problem
7. Demonstrate effective communication and computation skills

C. Explain how this program has contributed to the institution's mission and vision:

The Certificate in Applied Science in Computer Applications Specialist addresses the labor demands of various types of organizations. These organizations include accounting firms, financial institutions, federal and state operations, manufacturers, health-related establishments, utilities, high-tech companies and other service organizations. Graduates of the program are better prepared employees with the ability to perform the duties of Computer Applications Specialist professionals in Eastern's district to meet the technology qualifications of employers.

D. What strategic planning goal(s) of the college does this program contribute to?

The program's purpose is to provide students with the skills necessary to meet business demands of district employers. Eastern's district is a region in transition experiencing growth in business and industry. The region is home to numerous small and midsize businesses many of which are expanding. Additionally, new companies are considering relocating to the region. Considering the growth dynamics of the six counties in the Eastern district, there is a demand for graduates with Computer Applications skills. This program is designed to respond to the

increasing requirements of these employers by:

- Emphasizing professional skills training
- Meeting current and projected regional employment needs of businesses
- Increasing access to higher education throughout Eastern's responsibility district
- Providing adult learners with academically rigorous support and appropriate courses
- Providing program flexibility to meet a variety of job placement options

Eastern has developed four Strategic Plan objectives: Stabilizing and Increasing Enrollment, Increasing Student Retention & Success, Building Academic Quality and Increasing the Number and Type of Strategic Partnerships to promote growth. This program is contributing to the Strategic Plan by:

- Re-evaluating recruitment strategies for effectiveness
- Promoting the program through alumni
- Comparing program and course outcomes to ensure all outcomes are evident and aligned
- Re-evaluating curriculum to ensure program outcomes are met
- Meeting with high school Business Technology instructors and students regularly
- Applying Quality Matters (QM) criteria to the program courses
- Requiring, implementing, and monitoring regular and substantive interaction between students and instructors in online courses as required by the U.S. Department of Education

E. Please describe any unique components of the program that meet the needs of Eastern's district.

This Certificate is customized to serve small and midsize organizations in Eastern's district including medical, financial, educational, agricultural, and industrial companies. Students in this program complete a General Education core in Communication, Computer Literacy, and Math. Additionally, this Certificate includes technical core courses in Computer Applications, Business Management and Web Design. Students majoring in the Computer Applications Specialist program selects two courses from the list of restricted electives in the areas of Business and Information Systems.

F. Please provide any other information that explains how this program contributes to the college community and supports external partners or workforce needs.

From Fall 2017 to Fall 2022 three students graduated with a Certificate in Computer Applications Specialist and has graduated nine since Fall 2012:

- From the three graduates during this review period, one graduate started his own computer business and is serving the community with services such as computer repair and networking, and possess an Associate Degree in Applied Science in Information Technology.
- The second graduate completed an Associate Degree in Information Technology and secured an Internship, and was offered an IT job with the same internship provider.
- The third graduate transferred to another college and received an Associate Degree in an unrelated field and is not actively seeking a computer-related job.

Locally, this program addresses an unmet necessity of various local businesses and organizations including food processing, healthcare, banking, educational institutions, small businesses, and other service organizations.

Section II: Summary Update Since Last Program Review

A. Identification of weaknesses or deficiencies from the previous review.

From the previous review:
Sufficient enrollment in other related AAS programs exist to sustain this Certificate program since this program's courses are offered through AAS programs in Business Management and Information Technology. Courses such as Spreadsheet and Data Base Management Software require the newest software versions. The Spreadsheet Software (Excel) and Database Management Software (Access) are upgraded once every three years and the IT Department absorbs the cost. The IT Department purchases Office Suite licenses for the entire institution, and courses such as PC Repair/Troubleshooting and Networking that requires specific software, computers, and equipment. Previously, the IT Department cooperated with the Academics Department and provided instructor and student hardware, software, and IT resources.

To better serve Eastern's six-county district:

- Continue the program in its current format with full-time day course implementation
- Increase the number of Articulation Agreements
- Explore the feasibility of offering the Certificate as a web-based program
- Promote industry certification
- Apply Quality Matters standards to online and hybrid courses
- Utilize technology to assess courses and program
- Facilitate the transfer of graduates to Associate and Bachelor's Degree programs

Identification of weaknesses or deficiencies from the previous review and the status of improvements implemented or accomplished:
During the last Program Review Cycle, Eastern administered the NOCTI examinations for the first time. The examination results allowed Eastern to improve the Certificate's assessment

process. In the past five years, the quality of instruction improved because of more available well-qualified part-time instructors. Eastern is expanding its partnership with Potomac State College, Franklin University, Frostburg State University, Marshall, and West Virginia University.

In the past four years, several Business Technology instructors received Quality Matters certification. Additional Business, IT and General Education instructors will gain certification in the near future with the dissemination of Quality Matters standards to online courses.

Eastern uses Blackboard and Brightspace to link course outcomes with students' performance to generate reports and assess course outcomes. Eastern utilizes TestOut course materials for two restricted elective courses, and students have the option of taking a TestOut certification examinations without additional cost since the test expense is included in original course materials purchased by the students.

Challenges:
The Computer Applications Specialist program does not have full-time faculty. It utilizes adjunct faculty for core and elective courses. While relying on part-time faculty creates a challenge, it eliminates the high cost associated with hiring full-time faculty producing a low-cost program that generates an annual net income of $1,000.

Opportunities:
To fully serve Eastern's six-county district, it is recommended to continue offering the program and increasing the number of Articulation Agreements. Other goals include:

- Additional computer-related courses to the present listing of restricted electives including courses in Cyber Security
- Appling Quality Matters standards to online courses
- Utilizing technology to better assess courses and program

B. Status of improvements implemented or accomplished.

- Eastern introduced TestOut materials to certify students once the appropriate courses are completed through an industry exam
- Several IT related courses such as Cyber Security and Cyber Defense was developed and available as course substitutes for restricted electives
- Apply Quality Matters (QM) standards to online and hybrid courses; several courses were reviewed based on QM standards. A template was created based on QM standards and implemented as an evaluation measure for certificate courses for the purpose of quality control and continuous improvement
- Utilize technology to better assess course and program outcomes; Blackboard and Brightspace was the assessment forum of Computer Applications courses. Assignments, projects, and examinations were linked to course outcomes through Eastern's LMS. LMS generated reports is evidence in the assessment of the courses

• Eastern signed an Articulation Agreement with several colleges and universities including Potomac State College, Frostburg University, and Franklin University

C. If program goals or program learning outcomes have changed, reflect that here.
N/A

D. Provide a summary of any other curriculum changes or revisions since the last review. If there have not been any, put N/A below.
N/A

Section III: Student Learning Assessment

A. Describe and analyze your Program Learning Outcomes ▪ Provide evidence that students are achieving each program learning outcome, including results of annual program-level assessment activities ▪ Analyze the curriculum's effectiveness in helping students achieve the program learning outcomes ▪ Describe the effectiveness of instructional methods and support in helping students achieve the program learning outcomes Are all of the PLOs appropriately covered and sequenced to promote student success? (Place a copy of your PLO Mapping in Appendix A)
All Program Learning Outcomes (PLOs) are mapped to courses. Program Learning Outcomes have remained constant since the last review period, and are analyzed and assessed based on the performance of students in NOCTI's National examination (assessment measure) and student performance in program courses. Please refer to Appendix A and Section B below. Students are provided a variety of learning materials which include lectures, videos, discussion topics, hands-on practices and exercises. Students are given various tasks and homework assignments to ensure they have learned the Certificate outcomes. Eastern offers core courses and restricted electives to achieve program outcomes. Courseware coupled with significant learning materials is used in all program courses to enhance students' performance. Based on student's performance in NOCTI's national test results, Eastern students in comparison to the National Average of 3 students achieved an Average score of 73.3 (N=3, Avg. score 73.3). Eastern students outperformed the National Average results of 49 students with an Average score of 57.1 and exceeded the National Average by 22 points (N=49, Avg. score of 57.1). One student who took the test had already earned an Associate in Applied Science in IT, and another student had taken more than eighty credit hour courses in IT, Business, and other related courses resulted in students outperforming the NOCTI test by 22 points.

NOCTI test report:											
									Repor	3/2/20	
Standard Description	Group Test Count	Group Standard Score	Group Test Score	Site Cum Test Count	Site Cum Standard Score	Site Cum Test Score	State Test Count	State Standard Score	State Test Score	Nation Test Count	Nation Standard Score	Nation Test Score
Information Technology Applications	3	73.0	69.8	16	71.1	73.3	16	71.1	73.3	49	53.5	57.1
Academic Foundations	3	66.7	69.8	16	68.2	73.3	16	68.2	73.3	49	50.1	57.1
Systems	3	66.7	69.8	16	75.5	73.3	16	75.5	73.3	49	60.3	57.1
Ethics and Legal Responsibilities	3	88.9	69.8	16	84.0	73.3	16	84.0	73.3	49	65.3	57.1
Communications	3	60.6	69.8	16	66.5	73.3	16	66.5	73.3	49	56.2	57.1
Problem Solving, Critical Thinking, and Decision Making	3	66.7	69.8	16	69.8	73.3	16	69.8	73.3	49	56.1	57.1
Leadership and Teamwork	3	86.7	69.8	16	87.5	73.3	16	87.5	73.3	49	66.5	57.1
Safety, Health, and Environmental	3	63.0	69.8	16	75.0	73.3	16	75.0	73.3	49	59.4	57.1
Employability and Career Development	3	62.5	69.8	16	68.0	73.3	16	68.0	73.3	49	55.4	57.1
Information Support and Services	3	70.2	69.8	16	74.4	73.3	16	74.3	73.3	49	56.3	57.1

Since Fall 2021, Eastern has offered tutoring services through Tutor.com to support struggling students. Eastern also procured the services of Cengage Unlimited and TestOut, where students are provided supplemental instructional and learning materials such as ancillary lecture series, videos, discussion topics, interactive projects and hands-on materials. These additional support materials are expected to help students achieve the Certificate's Learning Outcomes not met in this review cycle.

B. Provide a <u>brief</u> summary report of any specific student learning outcomes assessed and describe the purpose, plan, and results attributed to that assessment.

Two assessment methods and measures are used to assess program outcomes. These assessment methods include students' performance in courses that align with program outcomes and student performance on NOCTI examinations that are compared with student performance at the national level, which is reflected as the benchmark. Based on NOCTI's test results, students outperformed the national average by 22 points. Outcome one of NOCTI's test is aligned with PLO one, two, and five; NOCTI five is aligned with PLO seven. NOCTI's outcomes one and ten are mapped to the Computer Applications Specialist field, and outcomes

two through nine pertain to Business Management. Students outperformed NOCTI's National Average because these students have already taken additional courses in Business Management, Information Technology, and other related fields.

According to Course Assessment Reports, students underperformed the benchmark of 75% by an average of 24% in CIS 121 (Database Management) and outperformed other subjects by an average of 10%.

To help students achieve Program Level Outcomes:

- Students are provided with a variety of learning materials which include lectures, videos, discussion topics, hands-on practices and exercises. Students are given various tasks and homework assignments to ensure they have learned the program outcomes. Eastern offers core courses and restricted electives to achieve program outcomes. Courseware coupled with significant learning materials is used in all program courses to enhance students' performance.
- In the past two years, faculty members were trained to use Cengage teaching platforms such as MindTap, CNOW, Aplia, *OWL,* and SAM. These platforms are utilized across Business Technology courses to take advantage of virtualized labs and hands-on learning, and testing platforms to facilitate the use of additional interactive learning activities. Additionally, Eastern uses TestOut course materials that provides simulation exercises for two of the IT courses.

The faculty, Division Chair and Assessment Committee regularly evaluate certificate courses. Each semester program specific courses are assessed, and the results are shared with faculty.

C. Provide a summary of course-level assessments over the past five years and how they have contributed to program success and improvement.

Course-level assessments are mapped to program outcomes. Course assessments are measurement implements that assess program outcomes; courses considered successful achieve a minimum benchmark of 75%. Course-level assessments use various measures including students' performance on homework assignments, multiple-choice questions, video summaries, hands-on practices, and discussion questions. These assessment results are shared with the faculty teaching the courses for future reference. As a follow-up, assessment recommendations are reviewed and evaluated the next time the course is offered.

From 2017 to 2022, seven-course assessment results indicate that students are achieving the course outcomes. On average, students outperformed the benchmark of 75% by 6%. The results of the course assessments are shared with faculty teaching the courses. In the areas that require attention (when the benchmark of 75% is not achieved), corrective measures are taken to strengthen student performance the next time the course is offered. Additionally, student evaluations of the courses and instructors are review and considered for efficiency purposes.

Course Assessment Reports:

Year	Semester	Subject	Course #	# of Students	Course Average	Threshold	Outcome Performance +/-	% of Outcomes Assessed
2017	Spring	CIS	119	21	85%	75%	10%	100%
2020	Fall	BUS	101	19	91%	75%	16%	100%
2017	Spring	CIS	119	21	85%	75%	10%	100%
2017	Fall	CIS	114	25	86%	75%	11%	100%
2019	Fall	CIS	114	27	89%	75%	14%	100%
2020	Spring	CIS	121	9	51%	75%	-24%	100%
2020	Spring	MGT	250	17	80%	75%	5%	100%
AVG.							6%	

D. What specific institutional general education goals have you focused on in this periodic review cycle?
Give a brief explanation of those learning activities, data collected and analyzed, and any changes made to the program as a result (i.e., the addition of curriculum, changes to existing curriculum, partnering with co-curricular activities).

Oral and Written Communications	A pilot project to establish a rolling General Education Assessment Cycle was launched in Fall 2021. A selection of General Studies courses collected data on oral and written communications for measurement of course artifacts against Eastern's approved rubrics. A rubric for a new English goal was developed for ENL 101 and ENL 102, and both course outcomes were amended to reflect the significant engagement with Informational Technology. It is anticipated that other alignments will occur when reviewing course learning outcomes.
Digital Literacy	A new General Education goal was introduced in Fall 2020 to better reflect course engagement with Informational Technology. Eastern is revising the outcomes of all Applied Science programs and Certificates to link program/certificate courses to General Education Outcomes. Implementation of this project will occur Fall 2023. Revisions include General Education goals pertaining to writing, oral communication, critical thinking, digital literacy, ethics and quantitative literacy.

Section IV: Utilizing Findings

Plans for program improvement:
Based on previous and current program reviews and NOCTI and course assessment results, students would benefit by: • Adding more emphasis on Database Management Systems that didn't meet outcomes • Improving the quality of online and hybrid courses by applying QM standards • Inviting industry guest speakers to engage with online and live classes • Providing informative videos to enhance student learning • Promoting discussion activities among students Since Fall 2021, Easterm procured the services of Cengage Unlimited. Computer students are provided supplemental instructional and learning materials such as ancillary lecture series, videos, discussion topics, interactive projects and hands-on materials. These additional support materials are expected to help students achieve the Program's Learning Outcomes not met in this review cycle.

Section V: Faculty and Staff Development

A. Discuss any significant staffing changes impacting the effectiveness of the program, including areas such as hiring, support, coordination for part-time faculty, etc.
In Spring 2019, Eastern hired its first Instructional Technology Specialist to support instructors with technology and online courses. This spring semester, Eastern hired an Online Instructional Consultant to collaborate closely with Division Chairs, instructors, and students. Part-time faculty are provided training by the Division Chair and Instructional Technology Consultant. There are four part-time and two full-time faculty members who teach program courses for the Computer Applications Specialist Certificate. Five of the six faculty members are QM certified, the Division Chair for Business, Computer, and Information Technology are certified as a Peer Reviewer and QM Administrator. The Business faculty and Division Chair are full-time with over fifteen years of teaching, program management, and industry experience. Every year during faculty orientation, an expert provides training and faculty development for full-time and part-time faculty members. The LMS platform is the trajectory for live and online courses.

Faculty credentials – Percentage of program courses taught by each faculty – Percentage of students advised by faculty - Quality Matters certifications and Awards received by the faculty:

	% Courses Taught	% Courses Taught	% Courses Taught	% Courses Taught		% of Students Advised	% of Students Advised	% of Students Advised	% of Students Advised	Quality Matters Certificates	Awards

Full-Time Faculty:	A.A.S. & CAS BUS	AAS & CAS ACC	AAS & CAS AST	AAS & CAS IT &CAS Comp. App. Specialist	AAS & CAS BUS	AAS & CAS ACC	AAS & CAS AST	AAS and CAS IT		
Murphy, Shirley, Associate Professor, M.B.A., B.S. Business	40% to 50%	20% to 25%	15% to 20%	10%	10%	5%			Rubric, IYOC	
Mirkhani, Seyed, Professor, Division Chair, M.S. Information Systems, M.S. Business/Finance, M.S. Math Education	10%	10%	10%	10%	90%	95%	80%	100%	Rubric, Peer Reviewer, IYOC, Site Administrator	Outstanding Contribution, West Virginia Community College Association
Part-time Faculty:										
Alt, Cindy, Information Technology, B.S., A.A.S.	5% to 10%	5%	10% to 15%	30% - 35%					Rubric	
Alt, Glenn, Information Technology, B.S., A.A.S.	5% to 10%	5%	10% to 15%	30% - 35%					Rubric	
Bhuiya, Mahmudor, M.B.A., M.S.S., M.S. Computer Science	5%	5%	5%	5%						
Lockard, Dawn, M.S., Accounting, B.S. B.U.S./ Accounting	5%	40-45%	0%	0%						
Perry, Craig, M.B.A, B.S. I.T.	0%	0%	0%	10%					Rubric	
Wilson, Monica, Instructor, M.S. Education, B.S. Business	0%	0%	20%	0%			20%			Outstanding Contribution, West Virginia Community College Association
Wolfe, Davida, A.B.D. M.B.A., BS - B.U.S./ Accounting	5%	5%	20%	0%					Rubric	

B. Share the program's measures of teaching effectiveness and what efforts to improve teaching effectiveness have been pursued. Discussion may include (but is not limited to):

➢ Teaching pedagogy
➢ Use of technology
➢ Innovative learning models

➢ Faculty development ➢ Curricular design and formats

In the past two years, faculty members were trained to use Cengage teaching platforms. These platforms are implemented in Business Technology courses to take advantage of virtualized labs, hands-on learning, and testing platforms to facilitate additional interactive learning activities. Additionally:

- Live lectures for two certificate courses are recorded and posted on Eastern's LMS for online students.
- The full-time faculty are provided laptop computers with software such as Snagit to facilitate lectures and screen capture for lectures and advising.
- The faculty received training regarding program evaluation.
- The performance of individual students in NOCTI tests is provided to faculty every semester for faculty review and program assessment.

From the three graduates of Computer Applications Specialist:

- One graduate completed an Associate Degree in Information Technology and is the proprietor of an IT business.
- One graduate earned an Associate Degree in Information Technology and secured an IT internship and was offered an IT job with the same internship provider.
- One graduate transferred more than sixty credit hours to Eastern and earned a Certificate. This student completed an Associate Degree at another institution in an unrelated field and is not actively pursuing employment in the computer sector.

Faculty members attended several national and regional trainings and webinars regarding best practices in teaching and learning, curriculum design, student advising, and assessment.

C. Discuss the contributions of your program faculty. (This is an area to share an overview of the exceptional aspects of your program faculty).

Items to consider may include:

- ➢ Significant accomplishments
- ➢ Publications, grants
- ➢ Advanced degrees, promotion
- ➢ Service to students/institution/community and others

The Computer Applications Certificate does not have a full-time instructional faculty member; however, an Administrative faculty member manages the program. The Division of Business, Computer, and Information Technology has six faculty members who possess a wide range of industry and educational expertise in Accounting, Finance, Business, Computer, Math, and Education. The significant industry and educational experiences of these faculty members helps the computer students familiarize themselves with real-world experiences.

A full-time faculty member holds three Master's Degrees, including a Master's Degree in Computer Information Systems, and another faculty member who is an Eastern graduate is completing a Doctor of Business Administration at Franklin University.

Another faculty member with the rank of Associate Professor has taught at Eastern for over fifteen years, and another faculty member with the rank of Professor has instructed at Eastern for over twenty years. A full-time faculty member is the recipient of the "Outstanding Contribution Award" of the West Virginia Community College Association and a faculty member worked as the Administrator of LMS and managed online courses for over fifteen years.

Full-time faculty members are actively involved in advising computer students, preparing them for the job market, and helping them advance their education. Faculty members regularly assist program graduates with employment. Additionally, they encourage, advise and assist graduates with transferring to Associate's and Bachelor's Degree programs.

In 2019, a visiting HLC team evaluated the Business Management program for approval of a fully online format, which has five common courses with the CAS in Computer Applications Specialist. This team met with full-time and adjunct faculty members who teach courses in Business and Computers. After a discussion and review of faculty personnel files, the Chair of the visiting team described the faculty members as very credentialed.

Section VI: Key Performance Indicators (KPIs)

A. Program enrollment data

	Fall 2022	**Fall 2021**	**Fall 2020**	**Fall 2019**	**Fall 2018**
Headcount	1	0	1	1	2
Full-Time Equivalent (FTE)	.5	0	.5	.5	1.5

Provide an analysis of the enrollment trends in your program. Include in that analysis actions you have taken, or plan to take, to address enrollment changes. You may also include what steps you would like to see the college take to support enrollments in your program.

Graduates with a Certificate in Computer Applications Specialist are mainly AAS students majoring in IT or Business Management. These AAS students apply for a Certificate in Computer Applications Specialist once they complete the program requirements.

From Fall 2017 to Spring 2022, the number of students enrolled in the Computer Applications Specialist program decreased for the following reasons:

- Enrollment declined at the state and national levels.
- Enrollment declined in high schools.
- As a new college, Eastern helped many adult students complete their education, which resulted in a decrease in the pool of adult students seeking a college degree.
- A strong job market has deterred students from seeking a college degree.
- Online programs offered by other colleges have attracted students from Eastern's district, particularly those students who live far from the main campus.

For the past two years, Eastern has linked low enrollment sections of live courses to online sections through its LMS. A full-time faculty member is recording her lectures in live classes for availability to online students. In the next five years, more students will show interest in online courses. An increase in enrollment depends on the resources assigned to marketing Eastern's programs.

The enrollment trend in the Computer Applications Specialist Certificate is consistent with Eastern's general enrollment trend. Recently, Eastern hired a marketing director to promote programs and increase enrollment.

To improve retention and increase graduation rates, the Division implemented courseware for all Business Technology courses. Eastern increased the number of tutoring services available to students and promoted these services through its LMS, and merged several similar courses for efficiency and to increase enrollment in Business Technology classes.

The Division Chair serves on the area's high schools advisory boards. He works closely with Business Technology instructors to develop Articulation Agreements and advises high school students. The faculty members meet with high school officials and students to recruit students. Engaging the alumni and graduates of the Business Technology programs also supports enrollment.

The Computer Applications Specialist students are required to complete seven program courses as well as three General Education courses. Typically, Computer Applications Specialist students are also enrolled in Associate Degree programs such as Information Technology or Business Management.

B. Program graduation history

	Spring 2022	Spring 2021	Spring 2020	Spring 2019	Spring 2018
Graduates	0	0	0	1	2

During this program review period, three students graduated with a Certificate in Computer Applications Specialist. The graduation rate for the Certificate is 50%. In general, enrollment is a continual challenge. To increase the enrollment, rate a budget of $1,000 was appropriated for promotion of the program.

Additionally, the faculty members' responsibilities include:

- working closely with the Marketing Director for program promotion;
- re-evaluating recruitment strategies for effectiveness;
- promoting the Certificate through alumni;
- comparing programs and course outcomes to ensure all outcomes are instructed and aligned;
- re-evaluating curriculum to ensure program outcomes are met;
- meeting with high school Business Technology teachers and students regularly;
- applying Quality Matters criteria to all courses;
- requiring, implementing, and monitoring regular and substantive interaction between students and instructors in all online courses as required by the U.S. Department of Education.

C. Program demand – *Provide the number of students enrolled, number of graduates, and credit hour production over the past five years (include summer, fall, and spring enrollment numbers)*

	2022-2023	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Headcount	2	1	1	1	2	2
FTE	1.5	.5	.5	.5	1	1.5
Degrees conferred	0	0	0	0	2	1
Credit hour production (refers to the number of credit hours generated by program faculty). The program does not have an assigned full-time faculty member. A full-time Business faculty instructs one of the required and two of the restricted elective courses. An Administrative faculty teaches one of the required courses.	393	285	423	357	405	324

Credit hour production: **Number of student credit hours generated by program faculty teaching in program courses over the academic year**, encompassing summer, fall, and spring.

> **D. If applicable, provide an analysis of early entrance courses offered in your program. Discuss challenges associated with delivering early entrance college classes and strategies you have employed to address those challenges. You may also include what steps you would like to see the college take to support the delivery of early entrance courses and student success in this area.**

N/A

E. Does this program lead to licensure or certification? If yes, include students' pass rates on licensure/certification exams. N/A

	20___	20___	20___	20___	20___
Name of exam: N/A					
Pass rate:					

F. Transfer data for program graduates

	2021-2022	2020-2021	2019 - 2018	2018-2019	2017-2018
Number of Eastern graduating students who transferred to a four-year institution. This is a Certificate program and all three graduates progressed and graduated with an Associate Degree.	0	0	0	0	0
Percentage of Eastern graduating students who transferred to a four-year institution	0%	0%	0%	0%	0%

G. Job placement data

	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Number of graduating students who sought employment.	0	0	0	1	1
Percentage of graduating students who sought employment.	N/A	N/A	N/A	100%	100%
Number of graduating students who gained employment.	N/A	N/A	N/A	1	1
Percentage of graduating students who gained employment.	N/A	N/A	N/A	100%	100%

Section VII: Program Sustainability

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A. Provide a summative analysis of the overall health and the current state of the program. Possible discussion points may be (but are not limited to): trends impacting the program, degree transferability, local and national demand for program graduates, student recruitment, and availability of qualified faculty to teach. You may include in your analysis what steps you would like to see the college take to address program viability challenges associated with your program.

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While Eastern can increase enrollment in online sections through effective marketing, enrollment in live sections is expected to remain low. This enrollment decrease is the result of several factors including the effect of the Pandemic that shifted live forum students to online courses. To address this issue, live sections are linked to online sections and instructed by one full-time faculty member. The lectures in live sections are recorded and available to online students.

The employment market for Computer Applications graduates is expected to remain consistently strong for the next five years. This should create challenges and opportunities for the program because a significant segment of high school graduates enter the job market without seeking a college degree. At the same time, a smaller population of high school graduates decide to advance their education by seeking a computer degree to secure higher-paying jobs.

Eastern has a 2+2 agreement with several universities. Graduates of the Certificate program can transfer all 30 credit hours to an AAS degree at Eastern and then to a Bachelor's Degree program at one of the several universities Eastern has established 2+2 Articulation Agreements.

The Division has eight highly qualified faculty members. Six of these faculty members instruct IT and other computer-related courses. The enrollment rate in the Certificate program is directly dependent on the resources assigned to market the program effectively.

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B. Identify specific program resource needs that can help with the overall effectiveness and sustainability of the program. Areas might include (but are not limited to):

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➢ Required technology/equipment/facility space
➢ Marketing/recruitment/professional development
➢ Staffing levels, etc.

If possible, provide cost estimates or quotes related to any of the above resource needs. Indicate if budget requests have been made since the last program review and if those requests are still unmet.

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Eastern effectively uses technology to serve computer students and has enough experienced and dedicated faculty to provide quality education. The Computer Applications Specialist and other Business Technology programs are low-cost programs. Revenues generated by tuition are sufficient to offset the cost of instruction.
In 2018, the Division of Business, Computer and Information Technology requested a

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$130,000 grant to hire an Instructional Technology Specialist for three years. Part of the grant was used to pay for costs associated with offering a fully online IT program. Eastern expended this grant effectively, and three of the Business Technology programs, Business Management, Accounting, and Administrative Support Technology, were approved by HLC as fully online programs. Additionally, hiring an Instructional Technology Specialist helped to transition live forum courses to online forums during the Pandemic.

A full-time faculty member instructs courses pertaining to Business Management. Several of these courses are required for similar programs such as Computer Applications Specialist, Administrative Support, and IT programs. These Business programs have several common courses with the Certificate and does not require a supplemental full-time instructional faculty member. As a result, Computer Applications Specialist students benefit from courses already available and instructed by the full-time Business faculty.

The total cost of Business Technology programs, including four AAS, five CAS, and CAS in Computer Applications is $110,000 annually. There is no cost associated with offering the Certificate in Computer Applications Specialist since all courses in this Certificate are offered through four other Associate Degrees in IT, Business, Accounting, and Administrative Support Technology.

In general, enrollment is a continual institutional challenge. To increase enrollment, a budget of $1,000 was assigned for marketing the Certificate program.

C. Provide a final reflection of the program summarizing its role in fulfilling the mission of the college and student learning success.
> **Indicate the goals and actions the program intends to take in this next cycle.**
> **Prioritize in rank order the most pressing needs facing the program and include how the college can assist in supporting these needs.**

The Certificate in Applied Science in Computer Applications Specialist has served Eastern's district for over ten years. Over six graduates with Certificates are currently working for a wide range of employers. The following recommendations are suggested to enable continued services to students and employers in Eastern's district:

- assign a budget of $1,000 to market the Certificate;
- work closely with the Marketing Director for program promotion;
- re-evaluate recruitment strategies for effectiveness;
- promote the Computer Program through alumni;
- compare program and course outcomes to ensure all outcomes are presented and aligned;
- re-evaluate curriculum to ensure program outcomes are met;
- meet with high school Business Technology instructors and students regularly;
- apply Quality Matters criteria to all courses;

• require, implement, and monitor regular and substantive interaction between students and instructors in all online courses as required by the U.S. Department of Education.

The results of five-year program reviews conducted yearly and submitted to WVHEPC by May 31, 2023. Request to submit reports at a later date are filed with the Academic Affairs office.

Date Submitted: 03/17/2023
Approved by Assessment Committee: 03/23/2023
Approved by LOT: 03/27/2023
Approved by Cabinet: 04/12/2023
Approved by the Board of Governors: 04/19/2023

Institutional Recommendations: (Check the appropriate box)
☐ Continue without Modifications
☐ Continue with Modifications – *Identify suggested or required modifications.
☐ Cease the Co-Curricular Activity - *Identify reasons for this recommendation below
☐ Move the Educational Program to the Reduction in Force process *Identify reasons for this recommendation below and identify what should be included in the teach-out plan.

*As required above, please identify the rationale:

Appendix A – PLO Mapping

	Certificate in Computer App. Specialist	CIS 114	CIS 119	CIS 121	CIS 133	CIS 111	IT 180	BUS 101	BUS 204	MGT 250	MKT 260
1	Demonstrate a basic knowledge of business organization and procedures by applying Procedures by applying business applications of computers	x	x	x		x		x	x	x	x
2	Demonstrate knowledge regarding computer information systems						x		x		
3	Design and manage a database			x							
4	Design an interactive website				x						
5	Analyze and present data in a virtual format	x	x	x		x					
6	Apply computer skills to create, analyze, and assess a business document to solve an organizational problem		x						x		
7	Demonstrate effective communication and computation skills	x									

Appendix B – Alignment of Assessed Outcomes

Course Assessment Reports:

Year	Semester	Subject	Course #	# of Students	Course Average	Threshold	Outcome Performance +/-	% of Outcomes Assessed
2017	Spring	CIS	119	21	85%	75%	10%	1,5,6
2020	Fall	BUS	101	19	91%	75%	16%	1
2017	Spring	CIS	119	21	85%	75%	10%	1,2
2017	Fall	CIS	114	25	86%	75%	11%	1,5,7
2019	Fall	CIS	114	27	89%	75%	14%	1,5,7
2020	Spring	CIS	121	9	51%	75%	-24%	1,3,5
2020	Spring	MGT	250	17	80%	75%	5%	1
AVG.							6%	