Post-Audit Review

For Occupational Programs Implemented Under the Provisions of Series 37

West Virginia Council for Community and Technical College Education

Institution: Eastern West Virginia Community and Technical College
Program (Degree and Title): Information Technology, Associate in Applied Science

I. Introduction

In 2009, The Associate in Applied Science Degree in Information Technology Program was created from the existing Information Technology courses offered through Eastern and WVExcite to serve the needs of local employers. Before 2009, Eastern successfully helped five students complete the brokered WVExcite program and secure IT related jobs. The partnership with WVExcite, the experience of offering IT courses, the need of the local employers and the success of IT graduates provided an opportunity for the college to create a broad based IT program. Currently, there are thirty students majoring in the IT program. The number of students is expected to grow as the program expands. Recently, IBM opened a branch in Mineral County. The presence of IBM as a major employer in Eastern's district will have a major and positive impact on the program.

Catalog Description of the program:

Information Technology
Associate in Applied Science
60 Semester Hours

The Information Technology program offers students an opportunity to earn an Associate in Applied Science degree. This program provides students with the skills and knowledge for entry level information technology-related careers. Graduates of this program will be qualified for employment as network technicians, help desk technicians, technical support representatives, and PC maintenance technicians. Upon completion of this program graduates will have basic knowledge of network administration, hardware/software interface and troubleshooting, operating systems, and design skills.

II. Program Goals and Objectives

The IT program was developed with the help of local employers. The goals of the program are to give students the skills to work in information technology positions and to respond to the needs of the employers. Graduates of the program will be better prepared

as employees to perform the duties of IT professionals in Eastern's district to meet the technology needs of their employers.

Program Need

Graduates with Associate Degree in Information Technology are employed nationally in numerous diverse businesses and organizations. Locally, this program addresses an unmet labor need of a variety of local businesses and organizations including food processing, cabinet manufacturing, healthcare, banking, educational institutions, high tech companies, educational institutions and other service organizations.

Upon successful completion of the program, the graduate will be able to:

- Apply basic system administration and scripting techniques
- Apply the foundation of management information systems
- Perform routine maintenance and repairs on the personal computer (PC)
- Install and troubleshoot operating systems
- Design an interactive website
- Demonstrate knowledge regarding information systems
- Design and manage a database
- Demonstrate basic knowledge of networking
- Demonstrate a basic knowledge of business organization and procedures
- Demonstrate effective communication skills
- Develop scientific knowledge and mathematical analytical skills and techniques
- Demonstrate global awareness and knowledge of human diversity

According to the U.S. Department of Labor (www.bls.gov):
Because of the wide range of skills for different computer support jobs, there are many paths into the occupation. A bachelor's degree is required for some computer support specialist positions, but an associate's degree or postsecondary classes may be enough for others. After being hired, many workers enter a training program that lasts for several months.

Pay

The median annual wage of computer support specialists was $46,260 in May 2010.

Job Outlook

Employment of computer support specialists is expected to grow 18 percent from 2010 to 2020, about as fast as the average for all occupations. Job prospects should be favorable."

May 2011 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates: Winchester, VA-WV
These estimates are calculated with data collected from employers in all industry sectors in Winchester, VA-WV, a metropolitan statistical area that includes parts of Virginia and West Virginia.

Occupation	Employment	Employment RSE	Employment per 1000 jobs	Location quotient	Median hourly wage	Mean hourly wage	Annual mean wage	Mean wage RSE
Computer Occupations, All Other*	110	0.0%	2.087	1.51	$37.20	$38.51	$80,100	2.2%
Network and Computer Systems Administrators*	70	9.6%	1.259	0.47	$33.38	$33.76	$70,220	2.8%
Computer Support Specialists	130	19.3%	2.418	0.49	$21.47	$22.27	$46,310	2.8%
Computer Programmers	50	18.3%	1.031	0.41	$33.33	$33.80	$70,310	4.3%

III. Assessment

The assessment of the AAS in Information Technology adheres to the guidelines established in Eastern's assessment plan to discern student academic achievement and course effectiveness in meeting the program goals and course outcomes.

- Throughout the program we expect to see a minimum of 80% of students completing courses that are attempted. Completers should demonstrate at least an average of 70% in each course though classroom assessments.
- Drop Rate: The drop rate is not expected to exceed 30%.
- Course-level effectiveness: Course outcomes for all of the Information Technology courses will be assessed. At least four outcomes from each course will be assessed in each assessment cycle. Exam questions linked to course learning outcomes will be included in the final exam.
- Persistence Rate: Students in the AAS degree in Information Technology will be tracked throughout their degree program to determine persistence through program completion.
- Graduation Rate: At least 70% of students enrolling in the Information Technology will successfully complete the program within a reasonable time based on full-time or part-time implementation. This will be measured by the number of students obtaining the AAS degree.

- Syllabus Analysis: Syllabus analysis will be conducted on an annual basis to assure consistency of outcomes with Master Course Record Forms and among sections of specific courses.
- Transcript Analysis: Transcript analysis will be conducted as triggered by deficiencies in course level assessment activities.
- Advisory Committee Review: Annual advisory committee review will provide qualitative evaluation of program effectiveness in meeting regional paraprofessional educator needs.
- Course evaluation surveys will be used as indirect assessment measures of student success and satisfaction.
- Graduate Placement Rate: Tracking of students completing the Program will be done by a survey to determine the number of graduates obtaining employment in their field of study. The survey will include questions to collect data on location, salary, job preparedness, and reasons why graduates are not working in their field if applicable.
- Courses in the program are being assessed on a cyclical basis. A minimum of four course learning outcomes are being selected from the targeted courses for evaluation. Dependent upon assessment findings, some outcomes will be assessed over multiple years to validate effectiveness of changes in curriculum or course materials. Exam questions addressing the target learning outcomes serve as indicators of student attainment of course learning outcomes. In the event that the minimum performance standard is not met, the unmet learning outcome will be targeted for further monitoring. The results may also trigger an evaluation of course materials supporting the learning outcome, revision of course materials or further curriculum revision. The information regarding the assessment is being shared with the faculty teaching the course.

IV. Curriculum

The Associate in Applied Science Degree in Information Technology Program requires eighteen credit hours of general education courses and forty-two credit hours of core and emphasis electives. Significant features of the Information Technology program include its broad based curriculum which can be customized based on the employer's need. Last year at the request of IBM, the college incorporated SAP (an enterprise software to manage business operations) into three of the IT courses.

Another significant feature of the program is its flexibility to expand through program elective courses. Currently, the program requires students to select an elective programming language and three IT electives from a defined list of courses. As the employers request certain skill sets, new courses can be added to the list of electives and new skill sets can be created to respond to the needs of employers. This flexibility allows the expansion of the program without restructuring the entire program.

The course lists with credit hours are listed in Appendix I

Many courses in the program are offered in the form of face-to-face, online, hybrid and web-enhanced formats. Program courses like PC Repair and Trouble Shooting, Spreadsheet Software, Data Base Management Software, Networking, and programming languages which require a significant "hands on" component, are regularly offered in face-to-face format to assure development of application skills and to help struggling students.

V. Faculty

The Associate in Applied Science Program in Information Technology currently utilizes adjunct faculty for all of the technical core and elective courses. Typically, Eastern offers 10 Information Technology courses in the fall and 10 in the spring semester. The college currently employs 7 adjunct faculty to teach the Information Technology courses.
This fall, Eastern is planning to hire a full-time faculty in Business Management and another full-time faculty in Information Technology. Both positions require a master's degree with 18 graduate hours in the teaching subject.
Hiring these two full-time faculty would improve the quality of the Information Technology program significantly. The job description of the IT faculty requires the faculty to teach computer related courses, including IT, computer fundamentals and computer applications. The faculty is also required to advise IT students.

VI. Enrollment and Graduates

Students graduating the Information Technology program are usually employed as network technicians, help desk technicians, technical support representatives, and PC maintenance technicians. Their salary ranges from $24000 to as much as $45000 annually.

To date five students completed their program, including three who received their AAS this spring.

Graduate I: Had a master's degree in Criminal Justice when she started the IT program. She currently works in IT and Criminal Justice fields with a salary of more than $50,000. This graduate lives and works outside the state of West Virginia.

Graduate II: Works part-time in IT related field receiving $12 an hour. He is working on a second AAS in Business Management. This graduate is hoping to find a job with IBM.

Graduate III: This graduate completed an AAS degree in IT in addition to Computer Applications Specialist, C.A.S. and Information Technology, C.A.S. She has been accepted to the BS program in Information Technology at American Public University.

This graduate works in IT related field receiving $12 an hour and has the goal of becoming an IT teacher/instructor.

Graduate IV: This graduate completed an AAS degree in IT in addition to Computer Applications Specialist, C.A.S. and Information Technology, C.A.S. He has been accepted to the BS program in Information Technology at American Public University.

Graduate V: This graduate completed an AAS degree in IT in addition to Computer Applications Specialist, C.A.S. She is planning to apply to Franklin University to pursue a bachelor's degree in IT.

VII. Financial

The instructional cost of offering a three credit hour course by a part-time faculty is $1500. The instructional cost of offering 20 program courses every year is approximately $32,000. However, much of this cost is shared by other AAS and Certificate programs.

The future resource requirements and source of funding are expected to remain the same and not to exceed more than five percent increase annually. The tuition collected to run the program is sufficient to support the sustainability of the program.

The college currently utilizes one of the regular classrooms which is equipped with computers as an IT lab. However, courses like PC Repair and Troubleshooting are usually taught in designated IT labs. The college is hoping to receive additional funding to build more classrooms and labs. The issue of a designated lab would be resolved if the college is successful in securing funding.

This fall, the college is hiring a full-time IT faculty. The cost of hiring a full-time faculty is approximately $42000. The tuition for the school year 2012-2013 has been increased by $10 per credit hour to finance the cost of hiring this faculty.

VIII. Advisory Committee

The advisory committee has been instrumental in determining the course curriculum and overall content. The advisory committee was integrally involved in all levels of program development from the initially conceptualization of the program, needs assessment and curriculum content. With implementation, the program courses are continually assessed and changed at the recommendation of both the faculty and the advisory committee. Students who are working in the field have also provided recommendations to strengthen the curriculum.

Advisory Committee members:

Beth Ludwig	Director Small Business Development Center
Tyson Riggleman	American Woodmark Corp
Penny Reardon	Executive Dean
Ashley Anderson	Owner / Operator The Kaposy
Sharon Gallery	Owner / Operator Gallery Communications

More members will be added to this advisory committee as the program expands and the college hires more faculty. An IBM staff will be recruited to serve on this committee.

IX. Accreditation

No accreditation process is available in this field of study.

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APPENDIX I

Information Technology, Associate in Applied Science Degree

First Year—Fall Semester				First Year - Spring Semester			
Dept.		**Course Title**	**Sem. Hrs.**	**Dept.**		**Course Title**	**Sem. Hrs.**
BUS	101	Introduction to Business	3	BUS	203	Communications in Business OR	3
CIS	108	Computer Fundamentals	3	ENL	102	English Composition II	(3)
CIS	154	Management Information Systems	3	CIS	121	Database Management Software	3
ENL	101	English 101	3	IT	134	Networking Fundamentals	3
Elective		Math Elective (100 level or higher)	3	IT	180	PC Repair and Troubleshooting	3
				SSC	147	Understanding Human Diversity	3
Total Semester Hours			***15***	***Total Semester Hours***			***15***
Second Year—Fall Semester				**Second Year—Spring Semester**			
Dept.		**Course Title**	**Sem. Hrs.**	**Dept.**		**Course Title**	**Sem. Hrs.**
CIS	119	Spreadsheet Software	3	CIS	133	Designing a Web Page	3
IT	181	Operating Systems	3	IT	276	IT Capstone OR	3
Elective		IT Elective	3	IT	278	IT Internship	(3)
Elective		IT Elective	3	Elective		IT Elective	3
Elective		Science Elective	3	Elective		IT Elective	3
				Elective		IT Programming Elective	3
Total Semester Hours			***15***	***Total Semester Hours***			***15***

Programming Elective (Select 1 course - 3 credit hours)		
Dept.	Title	Sem. Hrs.
IT 192	Introduction to Programming in Visual Basic	3
IT 194	Introduction to Programming Java	3
IT 233	Introduction to Web Programming	3
IT Electives (Select 3 courses – 9 credit hours)		
IT 210	Network Administration I	3
IT 215	Network Administration II	3
IT 228	Systems Analysis and Design	3
IT 269	Project Management	3

APPENDIX II
Faculty Data

*(No more than **TWO** pages per faculty member)*

Name: Seyed Mirkhani
Rank: Instructor

Full-time:
Part-time: X

Highest Degree Earned: MS/MS/MS
Date Degree Received: 1998/2000/2008

Conferred by: Johns Hopkins University/Strayer University/Nova Southeastern University

Area of Specialization: Business Finance/Information Systems/Mathematics

Professional registration/licensure:
Yrs. of employment at present institution: 10+
Yrs. of employment in higher education: 10+
Yrs. of related experience outside higher education: 5+
Non-teaching experience : 20+

To determine compatibility of credentials with assignment:

(a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught.) For each course include year and semester taught, course number, course title and enrollment.

Year / Semester	Course Number and Title	Enrollment
2012 / Spring	CIS 108 - Computer Fundamentals	80
2012 / Spring	IT 278 – IT Internship	2
2012 / Spring	BUS 276 – Business Management Capstone (Team Taught 20%)	4
2011 / Fall	CIS 108 – Computer Fundamentals	40

If degree is not in area of current assignment, explain:

APPENDIX II
Faculty Data

*(No more than **TWO** pages per faculty member)*

Name: Sharon Gallery
Rank: Instructor

Full-time:
Part-time: X

Highest Degree Earned: MBA
Date Degree Received: 1992

Conferred by: George Washington University

Area of Specialization: Business Management

Professional registration/licensure:
Yrs. of employment at present institution: 2.5
Yrs. of employment in higher education: 2.5
Yrs. of related experience outside higher education: 15 +
Non-teaching experience : N/A

To determine compatibility of credentials with assignment:

(b) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught.) For each course include year and semester taught, course number, course title and enrollment.

Year / Semester	Course Number and Title	Enrollment
2011 / Spring	CIS 121 / Database Management	10
2011 / Spring	CIS 133 – Designing a Webpage	10
2011 / Fall	CIS 119 – Spreadsheet Software	8
2012 / Spring	CIS 121 – Database Management	14
2012 / Spring	CIS 133 – Designing a Webpage	9

If degree is not in area of current assignment, explain:

APPENDIX II

Faculty Data

*(No more than **TWO** pages per faculty member)*

Name: Shirley Murphy
Rank: Instructor

Full-time:
Part-time: X

Highest Degree Earned: MBA
Date Degree Received: 2003

Conferred by: Frostburg University

Area of Specialization: Business Administration

Professional registration/licensure:
Yrs. of employment at present institution: 8
Yrs. of employment in higher education : 8
Yrs. of related experience outside higher education: N/A
Non-teaching experience : 20+

To determine compatibility of credentials with assignment:

(a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught.) For each course include year and semester taught, course number, course title and enrollment.

Year / Semester	Course Number and Title	Enrollment
Spring 2012	ACC 121/ Principles of Account. II	10
Spring 2012	ACC 240 Computerized Account.	10
Spring 2012	ECN 201 Principles of Micro	19
Fall 2011	ACC 120/Principles of Account. I	16
Fall 2011	ECN 202/ Principles of Macro.	14
Fall 2011	BUS 101 / Intro to Business	23
Spring 2011	ACC 121/ Principles of Account. II	5
Spring 2011	ACC 240 Computerized Account.	10
Spring 2011	ECN 201 Principles of Micro	22

If degree is not in area of current assignment, explain: N/A

APPENDIX II

Faculty Data

*(No more than **TWO** pages per faculty member)*

Name: Mahmudur Bhuiya
Rank: Instructor

Full-time:
Part-time: X

Highest Degree Earned: MS/MBA
Date Degree Received: 2004/2010

Conferred by: Purdue University/Indiana University

Area of Specialization: Applied Computer Science/Business Management

Professional registration/licensure:
Yrs. of employment at present institution: 3
Yrs. of employment in higher education: 6
Yrs. of related experience outside higher education
Non-teaching experience: 6

To determine compatibility of credentials with assignment:

(a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught.) For each course include year and semester taught, course number, course title and enrollment.

Year / Semester	Course Number and Title	Enrollment
2011 / Spring	IT 194 – Intro to Programming Java	4
2011 / Fall	IT 194 – Intro to Programming Java	8

If degree is not in area of current assignment, explain:

APPENDIX II
Faculty Data

*(No more than **TWO** pages per faculty member)*

Name: John Holmes
Rank: Instructor

Full-time:
Part-time: X

Highest Degree Earned: MBA
Date Degree Received: 2001

Conferred by: St. Edwards University Austin, TX

Area of Specialization: Business Management

Professional registration/licensure:
Yrs. of employment at present institution: 6
Yrs. of employment in higher education: 6
Yrs. of related experience outside higher education:5
Non-teaching experience : 5

To determine compatibility of credentials with assignment:

(a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught.) For each course include year and semester taught, course number, course title and enrollment.

Year / Semester	Course Number and Title	Enrollment
2011 / Spring	BUS 203 – Communications in Bus.	9
2011 / Fall	BUS 101 – Introduction to Business	14
2012 / Spring	BUS 203 – Communications in Bus.	10
2012/ Spring	MGT 250 – Principles of MGT	11

If degree is not in area of current assignment, explain:

APPENDIX II
Faculty Data

*(No more than **TWO** pages per faculty member)*

Name: Salim Bhuiyan
Rank: Instructor

Full-time:
Part-time: X

Highest Degree Earned: MS
Date Degree Received: 2009

Conferred by: Purdue

Area of Specialization: Computer Science

Professional registration/licensure:
Yrs. of employment at present institution: 3
Yrs. of employment in higher education: 3
Yrs. of related experience outside higher education: 3
Non-teaching experience : N/A

To determine compatibility of credentials with assignment:

(a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught.) For each course include year and semester taught, course number, course title and enrollment.

Year / Semester	Course Number and Title	Enrollment
Spring 2011	IT 228 - System Analysis and Design	2
Spring 2011	IT 269 - Project Management	2
Fall 2011	IT 228 - System Analysis and Design	7
Fall 2011	IT 269 - Project Management	5
Spring 2012	IT 228 - System Analysis and Design	5
Spring 2012	IT 269 - Project Management	2

If degree is not in area of current assignment, explain:

APPENDIX II
Faculty Data

*(No more than **TWO** pages per faculty member)*

Name: Ashley Anderson
Rank: Instructor

Full-time:
Part-time: X

Highest Degree Earned: MBA
Date Degree Received: 2009

Conferred by: West Virginia Wesleyan

Area of Specialization: Business Management

Professional registration/licensure:
Yrs. of employment at present institution: 1
Yrs. of employment in higher education: 1
Yrs. of related experience outside higher education: 3
Non-teaching experience : N/A

To determine compatibility of credentials with assignment:

(a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught.) For each course include year and semester taught, course number, course title and enrollment.

Year / Semester	Course Number and Title	Enrollment
2011 / Fall	CIS 119 - Spreadsheet Software	10
2012 / Spring	BUS 206 – Business Law	7
2012 / Spring	CIS 119 - Spreadsheet Software	15

If degree is not in area of current assignment, explain:

APPENDIX III
Headcount and Statistics on Graduates

Three year trend data on graduates and majors enrolled:

Trend Data on Graduates and Majors Enrolled

Number of Majors and Graduates by Term				
Academic Term	**Majors**	**Credit Hours**	**FTE**	**Graduates**
Fall 2009	7	93	6.2	0
Spring 2010	10	123	8.2	0
Summer 2010	5	17	1.1	0
Fall 2010	18	179	11.9	1
Spring 2011	18	195	13	0
Summer 2011	5	30	2.0	0
Fall 2011	21	206	13.7	0
Spring 2012	31	300	20	3
Total	115 (duplicated HC)	1141	76.1	4

Enrollment in Technical Core

	Fall 2009	**Spring 2010**	**Fall 2010**	**Spring 2011**	**Fall 2011**	**Spring 2012**	**Total HC**	**Total FTE**
CIS 119 (3 Cr)	25	11	15	3	18	15	**87**	**5.8**
CIS 121 (3 Cr)	0	25	0	16	0	14	**55**	**3.7**
CIS 133 (3 Cr)	0	17	0	10	0	9	**36**	**2.4**
CIS 154 (3 Cr)	0	0	16	0	0	0	**16**	**1.1**
IT 134 (3 Cr)	0	0	0	15	0	10	**25**	**1.7**
IT 180 (3 Cr)	0	0	0	18	0	11	**29**	**1.9**
IT 181 (3 Cr)	0	0	0	0	14	0	**14**	**0.9**
IT 276 (3 Cr)	0	1	2	0	1	0	**4**	**0.3**
IT 278 (3 Cr)	0	0	0	0	0	2	**2**	**0.1**