

Eastern West Virginia  
Community and Technical College



Program Review  
Associate in Science (A.S.)  
2016

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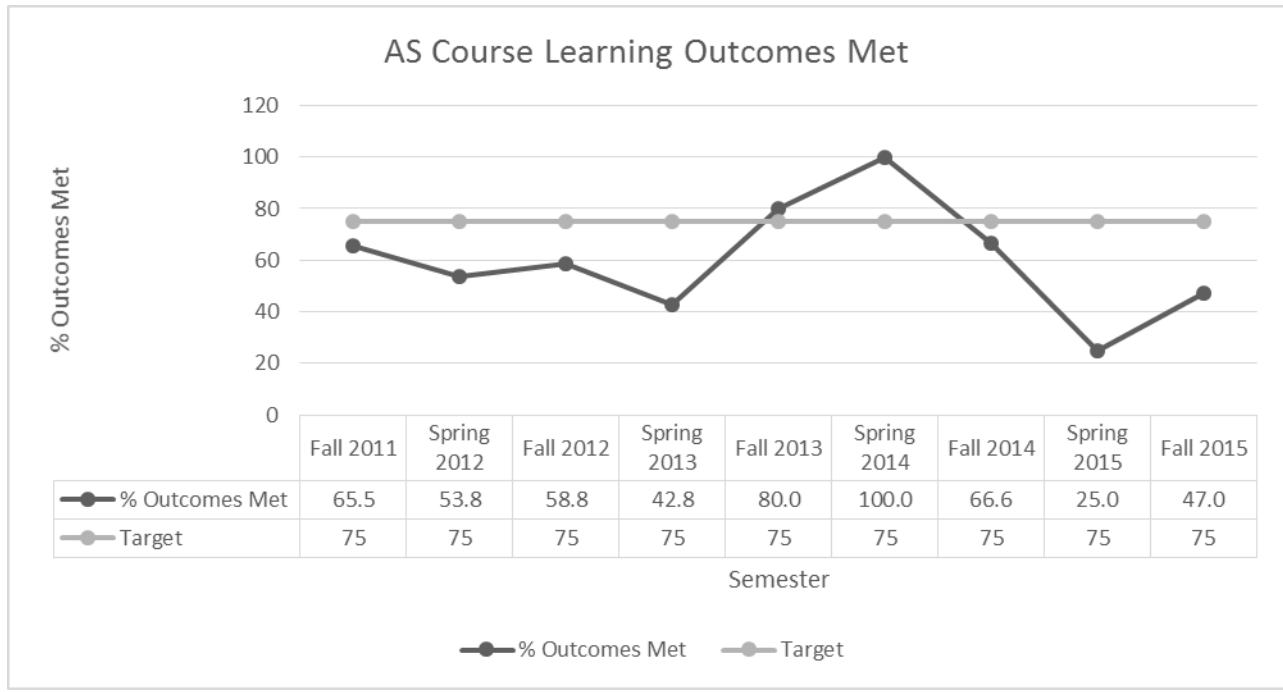
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Associate in Science (A.S.)  
CIP Code: 23-240199  
Eastern West Virginia Community and Technical College

**Program Outline**

The Associate in Science (A.S.) degree program was designed for students whose educational expectation is to transfer to a baccalaureate institution. An A.S. degree requires 60 credit hours consisting of a comprehensive general education core, concentration electives, and general electives. The A.S. degree is designed to assure competency in the general education core while providing flexibility for customization to meet the student’s education goals and the requirements of the receiving institution. To allow adaptability to a variety of baccalaureate programs, students work with an advisor to align their selected electives to the specific baccalaureate institution’s general education requirements. Additionally, first-time students who may be undecided about a technical major can select from natural sciences, mathematics, and technology to broaden their knowledge and interests in a wide-variety of disciplines.

**Synopsis of Significant Findings: Meeting Learning Outcomes**



Full data from submitted Course Assessment reports can be found in Appendix A.

35 Course Assessment reports were submitted between Fall 2011 and Fall 2015. Of these, 14 (40%) showed that 75% or more of their learning outcomes had been met.

The 21 reports which showed that the benchmark had not been met were distributed as follows:

CIS – 1  
BIO – 2  
ENL – 2  
MTH - 16

CIS 114: Introduction to Computer Apps and Concepts

- Next Course Assessment report is due Fall 2018
- The combined pass rate of the four sections offered in Fall 2016 was 81.5%

BIO 124: Human Anatomy and Physiology I

- Next Course Assessment report due Fall 2018
- The combined pass rate of the two sections offered in Fall 2016 was 97.2%

BIO 125: Human Anatomy and Physiology II

- Next Course Assessment report due Spring 2017
- The combined pass rate of the three sections offered in Spring 2016 was 87.5%

ENL 99: Beginning Composition

- ENL 99 became ENL 100 in Fall 2015
- Next Course Assessment report due Fall 2017
- The combined pass rate of the three sections offered in Fall 2016 was 88.2%

ENL 102: English Composition II

- Next Course Assessment report is due Spring 2017
- The combined pass rate of the two sections offered in Fall 2016 was 82.6%

In the absence of current Course Assessment reports, the most recent, examination of the last available results suggest that the above courses are currently functioning adequately and immediate investigation and intervention is not needed. Writers of the next Course Assessment reports for these courses should, as a matter of course, review previous reports and continue to address Learning Outcomes that have not been met to the 75% benchmark.

Of the 16 math classes, which did not achieve the 75% benchmark, 4 have been discontinued. The issue of math classes is historic and ongoing. Course Assessment reports are completed promptly and thoroughly – they show a history of adjustments and improvements made over the years, and refinements continue to be introduced based on assessment results. Difficulties with developmental math courses are not confined to Eastern, and math faculty continues to seek new strategies. A developmental math conference in May 2017 will be attended by several Eastern delegates.

## **Plans for Program Improvement**

The improvement plan for the Associate of Science program is to continue expanding formal articulation agreements with baccalaureate institutions. Until May 2011, Eastern had agreements with only Franklin University and Potomac State College in the area of business. Since 2011, Eastern has expanded its articulation agreements considerably, which is explained further under the Identification of Weaknesses/Deficiencies section of the report.

Although major strides have been made since the last program review, Eastern still needs to expand specific 2+2 agreements where the final two years at a baccalaureate institution may be completed online. Many Eastern students have occupational and familial obligations, which limits their ability to transfer to traditional four-year programs. Expanding 2+2 agreements, which allow Eastern students to finish their baccalaureate degrees from home, would be a great asset to Eastern's service region. Currently, if A.S. students are interested in finishing their degrees online, they may enroll in Franklin University or in a unique pathway program leading to a 4-year degree in Multidisciplinary Studies from West Virginia University. Future expansion of 2+2 agreements could include West Virginia State University's baccalaureate degree in Technical Writing where students can finish their final two years online. Also, since achieving national accreditation, Eastern's Nursing Program will pursue 2+2 agreements with other state institutions as well.

Enrollment trends impact program offerings, class sizes, and graduation rates. As enrollment increases, course offerings will continue to be expanded to include additional science course offerings and upper division mathematics courses. Until recently, Eastern employed one full-time mathematics instructor for A.S. majors; however, beginning in Fall 2016, Eastern hired a full-time natural science instructor, who has been instrumental in improving science course offerings and implementing the Biological and Environmental Technology (B.E.T.) program at Eastern.

A weakness connected with the A.S. program centers on Eastern's program review process itself. Eastern continues to develop its assessment processes; generating strategies to institutionalize the use of assessment data to improve student learning and support curriculum improvement has already begun with the creation of annual program-level assessment reports, an adjunct assessment project, a hybrid full-time faculty/assessment facilitator position, and the adoption of Blackboard Data Analytics as a data tracking system. Eastern's Annual Program Assessment Reports will review at least three program outcomes over designated years, which will help Eastern generate more qualitative data. The piloted adjunct assessment project will recruit part-time faculty to conduct Master Course Record reviews, chart general education outcomes, create course-level assessments, and generate specific course assessment plans. Also, Eastern's recent adoption and training in Blackboard Data Analytics will provide Eastern staff access to useable data, which will help analyze whether initiatives are effective.

Although Eastern has followed the standard, state-wide cycle for program-level assessment and program review in its Assessment of Student Academic Achievement Report, the feasibility of creating annual program level assessments for all programs is a daunting task considering the lack of full-time faculty in certain content areas and the fact that Eastern currently has only two

division chairs. Altering the program assessment cycle, by giving time to collect data, could refine the assessment process.

Current plans for the improvement of specific math courses can be found in the corresponding Course Assessment reports.

### **Identification of Weaknesses/Deficiencies**

Eastern has increased the variety of available courses in the natural sciences and mathematics, addressing one of the previous program review's recommendations. Course offerings are still limited by the availability of qualified adjunct faculty and sufficient enrollment to provide multiple electives each semester, but the following list of new courses were added between 2011 and 2015: BIO 127; CHM 100 & 100L; GSC 100 & 100L; GSC 120; MTH 102, MTH 200, and PHS 115. The addition of these 7 mathematics and natural science classes have allowed students more choices in course topics when meeting their general education requirements and speeds completion.

Another identified weakness from the previous program review addressed the lack of web-based education courses. Prior to 2011, no online EDE or EDF courses were offered at Eastern; currently, Eastern offers at least two EDE or EDF courses online every semester, which allows students more flexibility when structuring their academic schedules.

Furthermore, Eastern has signed articulation agreements with Davis and Elkins College, West Virginia University, West Virginia State University, Shepherd University, and Marshall University allowing for Eastern A.S. students to transfer easily to these institutions without losing credits. These formal agreements are less dependent on individual advisor recommendations and allow the students assurances that the programs have been reviewed and accepted for transfer. These new articulation agreements have addressed previous program review concerns centering on the low number of articulation agreements with baccalaureate institutions at Eastern.

The availability of laboratory space was also an identified limitation outlined in the previous program review. Eastern added a new wing to its main campus in 2015, which included a second wet lab. Eastern can now accommodate approximately 23 students in each lab for natural science courses, which is satisfactory for a community college of Eastern's size.

The proportional change in total A.S. majors has been relatively minimal throughout the last five years. Total enrollment in Fall 2011 included 11 A.S. majors, while Fall 2015 showed an increase in headcount (18 students) with a slight increase in FTE (+2.2). Table 1 details A.S. enrollment patterns over the past several years, which has remained relatively steady although the number of graduates dropped in 2014-2015.

**Table 1: 5 Year Trend Data on Graduates and Majors**

<b>Semester</b>	<b>Headcount</b>	<b>FTE</b>	<b>Full-Time (%)</b>	<b>Graduates</b>
<b>Fall 2011</b>	11	9.1	9 (82%)	
<b>Spring 2012</b>	18	12.1	8 (44%)	<b>2011-2012: 12</b>
<b>Fall 2012</b>	23	17.1	14 (61%)	
<b>Spring 2013</b>	24	17.3	12 (50%)	<b>2012-2013: 8</b>
<b>Fall 2013</b>	17	11.4	7 (41%)	
<b>Spring 2014</b>	14	6.3	4 (29%)	<b>2013-2014: 9</b>
<b>Fall 2014</b>	11	7.5	6 (55%)	
<b>Spring 2015</b>	12	8.1	7 (58%)	<b>2014-2015: 3</b>
<b>Fall 2015</b>	18	11.3	7 (39%)	
<b>TOTAL</b>	148	100.2	74 (50%)	<b>Fall 2011-Spring 2015: 32</b>

**Summary of Assessment Model and Utilization for Program Improvement**

Eastern’s assessment plan consists of three levels: entry level assessment (ACCUPLACER, SAT, ACT), active enrollment assessment (course and program assessment, student satisfaction surveys, etc.), and post-graduation assessment (employment satisfaction survey, alumni survey, employment and salary data, etc.). A.S. students participate in the ETS Proficiency Profile, which tests four core skill areas – reading, writing, mathematics, and critical thinking. It is a test that the Voluntary System of Accountability (VSA) has selected as a gauge of general education outcomes. IDEA Short Form Reports (i.e. course evaluation surveys) are administered each semester in all course sections with enrollment of six or more students. Course completion rates and student tracking studies are used as a measure of overall program success. All general education courses are assessed on a cyclical basis, and recommendations for improvements are funneled into the feedback loop so that future Course Assessment reports will address any course shortcomings. A summary of Course Assessment reports is provided in Appendix A.

Compared to the May 2011 A.S. Program Review, in which only 7 course-level assessment reports were submitted, 37 course-level assessment reports for general education courses were submitted from Fall 2011 through Spring 2015, including two longitudinal studies comparing collected learning outcome data over seven separate semesters, assessing over 200 students in each report, which created a much larger sample size.

All students enroll in the above courses to meet general education requirements, and students are not yet tracked by degree in the reporting of course-level assessment. No external review was conducted for this program.

**Table 2: Comparison of Eastern Proficiency Profile Scores: A.S. Majors with Mean Scores**

<b>Year</b>	<b>ETS Mean Score</b>	<b>% Above ETS Mean Score</b>	<b>% Below ETS Mean Score</b>	<b>Eastern's Mean Score</b>	<b>A.S. Graduates Mean Score</b>	<b>% Above Eastern's Mean Score</b>	<b>% Below Eastern's Mean Score</b>
<b>2011-2012</b>	438.54	68% (40)	32% (19)	443.86	430.72	49% (29)	51% (30)
<b>2012-2013</b>	438.54	45% (27)	55% (33)	438.33	432.42	45% (27)	55% (33)
<b>2013-2014</b>	438.54	48% (39)	52% (42)	444.04	451.28	42% (34)	58% (47)
<b>2014-2015</b>	439.3	47% (36)	53% (41)	446	441	45% (35)	55% (42)

As seen in Table 2, Eastern's most recent mean score on the ETS Proficiency Profile for the 2014-2015 cohort was 446, approximately 6.2 points higher than ETS reported mean for associate degree granting institutions. The report score (mean) for the 2014-2015 Eastern cohort group was also slightly higher in comparison to Eastern's 2013-2104 test group. Furthermore, 47% of the scores were at or above the ETS mean score as compared to 48% of the previous cohort. For the last two academic years (2013-2015), A.S. graduates have outperformed the ETS mean score as well by as much as 12.74 points. Given the slight variation between test scores of the two most recent cohorts, faculty will conduct a further review of the general education curriculum and related supporting policies.

### **Data on Student Placement**

From Fall 2011 through Fall 2015, 32 students graduated with an A.S. major. Of these 32 students, student placement data has been collected on 19 students (59% of cohort). No information was available on 13 graduates.

- 10 students (52%) are employed full-time
- 7 students (36%) are currently enrolled in B.A. programs
- 1 student (5%) is currently enrolled in a M.A. program
- 3 students (15%) graduated with baccalaureate degrees

### **Final Recommendations**

The recommendation is to continue offering the A.S. program in its current format. Finishing an A.S. degree at Eastern allows students state-guaranteed privileges when transferring to a four-year West Virginia colleges or universities, and most importantly, Eastern's A.S. degree is a gateway to dozens of careers and baccalaureate institutions. The following issues will be addressed during the next program review cycle:

1. By engaging adjunct faculty in assessment, measures of student learning could be continually assessed and revised. Faculty are the key to curriculum improvement, so professional development opportunities for faculty should center on assessment training. Holding annual assessment workshops or retreats would streamline the assessment process and emphasize Eastern's commitment to closing the feedback loop.

2. Continuing to increase the number of articulation agreements, by focusing on 2+2 agreements where the last two baccalaureate years can be completed online, would afford students the opportunity to continue their education from home. Eastern should broker articulation agreements not only with state-wide online programs, like West Virginia State University's Technical Writing program, but other accredited online baccalaureate institutions throughout the U.S.
3. A focus on curriculum improvements based on assessment data would help overcome classic barriers to conducting meaningful assessment. Course mapping and the creation of rubrics for general education outcomes are examples of how Eastern's assessment process could be improved.
4. Eastern needs to increase the number of completed course-level assessment reports to reflect an increased emphasis on student learning. Unmet outcomes need to be re-evaluated in future reports emphasizing the importance of closing the feedback loop.
5. By utilizing Blackboard Data Analytics (BBDA) in the program review process, Eastern can identify and overcome barriers to student success and keep learners on track for graduation. Implementing BBDA in future program reports will institutionalize the use of assessment data and improve student learning.



**Appendix A: Summary of Course Level Assessments for All Participating Students**

<u>Semester</u>	<u>Course Assessed</u>	<u># of Students</u>	<u>Outcomes Met at 75% or above</u>	
			#	%
Fall 2011	ECN 201	7	3 of 4	75
Fall 2011	ENL 99	53	4 of 6	66.6
Fall 2011	ENL 102	27	3 of 6	50
Fall 2011	MTH 90	58	2 of 5	40
Fall 2011	PSY 219	17	4 of 4	100
Fall 2011	SSC 147	19	3 of 4	75
Spring 2012	MTH 95	63	2 of 5	40
Spring 2012	MTH 96	41	1 of 4	25
Spring 2012	PSY 213	24	4 of 4	100
Fall 2012	EDF 203	17	4 of 4	100
Fall 2012	GSC 109	19	3 of 4	75
Fall 2012	MTH 95	62	3 of 5	60
Fall 2012	MTH 96	28	0 of 4	0
Spring 2013	BIO 124	21	0 of 4	0
Spring 2013	BIO 125	16	2 of 4	50
Spring 2013	CIS 108	17	3 of 4	75
Spring 2013	ECN 201	14	4 of 4	100
Spring 2013	MTH 90	29	6 of 14	42.8
Spring 2013	MTH 121	9	1 of 4	25
Spring 2013	MTH 123	3	2 of 4	50
Spring 2013	MTH 135	21	0 of 4	0
Fall 2013	CIS 108	25	13 of 13	100
Fall 2013	ECN 201	14	4 of 4	100
Fall 2013	MTH 99	12	2 of 4	50
Fall 2013	MTH 225	17	1 of 4	25
Spring 2014	CIS 108	25	40 of 40	100
Spring 2014	ECN 202	9	4 of 4	100
Fall 2014	ECN 201	21	4 of 4	100
Fall 2014	MTH 115	10	2 of 4	50
Fall 2014	MTH 123	12	2 of 4	50
Spring 2015	MTH 121	20	0 of 4	0
Spring 2015	MTH 135	26	2 of 4	50
Fall 2015	CIS 114	9	4 of 9	44.4
Fall 2015	MTH 102	6	3 of 4	75
Fall 2015	MTH 225	10	1 of 4	25
Spring 2012 –Spring 2015	ENL 101	235	17 of 24	70.8
Spring 2012 –Spring 2015	ENL 102	215	16 of 21	76.1