

**Assessment, Improvement, Measurement (AIM) Report: 03/13/2015****Reporting Years:** 2011-2016**Program:** Engineering and Electronics Technology**Coordinator(s):** Kevin Jensen, Karman Wheeler**Program Quality and Student Success****External awards or other recognitions of students, faculty, and/or program.**

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Students					
Faculty					
Program (include accreditation if applicable)					

**Average actual time and credits to degree completion.**

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
General Education Credit Hours					
Technical Credit Hours					
Total Credit Hours					
Number of Graduates					
Average Actual Time to Degree					
Average Actual Credits to Degree					

**Employer and student satisfaction.**

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Employer Satisfaction Survey Results		50% (1/2)	100% (8/8) PAC survey	0 responses	
Graduate/student satisfaction		100% (6/6) 2010-11 grad surveys	100% (6/6) 2011-12 grad survey	100% (15/15) 2012-13 grads	
Advisory Board/Employer Recommendations for Improvement					

**Job placement data for program graduates.**

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016

Number of graduates		4 surveyed (2010-11 grads)	7 surveyed (2011-12 grads)	15 surveyed (2012-13 grads)	
Number of graduates gaining employment		3	6 employed;6 in field	14 employed; 12 in field.	
Percentage of graduates gaining employment		75%	86%; 86% in field.	93%; 80% in field.	
KY Unemployment Insurance job data		UI 89%	UI = 83%	82.5% (n=40)	

**Pass rates on licensure/certification exams (if applicable).**

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Total # graduates attempting					
Total # passing on first attempt					
Total # passing after multiple attempts					
Pass rate of all attempting					

**Productivity and Funding**

**Student measures.**

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Enrollment (Academic Year)					
Fall Enrollment		130 (Fall 2011)	101 (Fall 2012)	106 (Fall 2013)	
Credentials Conferred		20 AD, 42 dip, 195 certs (2011-12)	20 AD; 36 dip; 141 certs (2012-13)	16 AAS;14 dip;138 certs (2013-14)	
Credit hour production		1,006 (Fall 2011)	898 (Fall 2012)		

**Student credit hour per instructional faculty FTE.**

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Student credit hour per instructional faculty FTE.		193 (Fall 2011)	214 (Fall 2012)		

**Extramural funding.**

Source of Funding	2011-2012
No funding sources	

Source of Funding	2012-2013

No funding sources
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<b>Source of Funding</b>	<b>2013-2014</b>
No funding sources	

<b>Source of Funding</b>	<b>2014-2015</b>
No funding sources	

<b>Source of Funding</b>	<b>2015-2016</b>
No funding sources	

**Comments (2012-2013)**

<b>Roles</b>	<b>Comments</b>
<b>Coordinator</b>	
1. Strengths of the Program	The Engineering and Electronics Technology program continues to maintain strong enrollment and graduated approximately 20 AAS students this year. Our advisory committee continues to support the program and the current mission. We have continued to increase enrollment from 72 students (09-10), 124 students in 10-11 to 130 students (11-12). This is a 1.8% increase in 2 years. Retention rates have increased from 45.1% in 10-11 to 84% in 11-12. Student satisfaction remains at 100% with an increase in the number of respondents (from 4 to 6). Equipment has been purchased through Perkins funding to maintain industry standard equipment training. The new Engineering and Electronics capstone course, where students review the materials in the program and take a national test (NOCTI) for assessing student outcomes, was started. The capstone enrollment has already doubled as more students are required to take it. We are also allowing Jefferson students to take the course online at the request of the Jefferson program coordinator.
2. Items Requiring Continued Attention	Even with an increase in retention rate, we will continue to monitor future retention rates. Employer satisfaction is still at 50% this year (1 of 2). The survey questions might still be a factor as it was last year. We have no way of knowing. Also, with the low rate of return (2), the true story of how satisfied our employers are is hidden. Unlike some of the programs, many of our students do not inform us of where they are working. We have started an opt-in text announcement system where we can ask current and former students where they are employed. If they provide me that information, I will be giving that information to IR to potentially improve our return numbers.
3. Document and provide evidence indicating how last year's program review resulted in improvements in the program.	Student learning outcomes have been positive in many aspects. We have taken the areas we have focused on and tried to improve upon those areas. Soldering, troubleshooting, and construction techniques are being emphasized in all program areas. The NOCTI exam is just being implemented this year as students come to the end of their program and earn a degree. This exam will be used in the future to gauge learning outcomes, and map out areas needing improvement in the program. At this time, we have not had enough students take the exam to see what impact it will have. We expect 100% of our program graduates will be taking the exam next year (13-14)
<b>Assistant Dean</b>	The Engineering and Electronics Technology program has high scores for Student Satisfaction (100%), Employer Satisfaction for Technical classes/proficiency (100%), and Employer Satisfaction for General Education courses (100%) for the reporting period. The reported Job placement figures did drop from 100% to 42.9% for the 2010 2011 school year. This is a trend noted in the Electrical Technology program. The sluggish economy during the period and may account for some of this decrease in placement. Since that time manufacturing in the Bluegrass region has rebounded and it is our hope that the figures in the area will return to normal in the next reporting period. The placement rate will be monitored for the

	<p>coming year and reevaluated at that time. The Engineering Technology program continues to have strong enrollment and a high number of credentials issued for the reporting period. According to the KCTCS 2010 2011 Fact Book the program issued 273 credentials which included associate degrees, diplomas, and certificates in the 2010 2011 school year. This was up from 247 for the preceding reporting period. This figure accounts for 7.39% of all credentials issued by Bluegrass Community and Technical College for the reporting period. Please see below. <a href="http://www.kctcs.edu/~media/System_Office/About/Factbook%2012/1_Factbook_11-12_WEB_2.ashx">http://www.kctcs.edu/~media/System_Office/About/Factbook%2012/1_Factbook_11-12_WEB_2.ashx</a> Prior to 2009 2010 school year student Retention scores have been above 50% for the Engineering Technology program. While up slightly from 41% in the 2009 2010 school year to 45.1% in the 2010 2011 reporting period the rate is down from 79.7% in 2008-2009 reporting period. Beginning in 2009 2010 a large number of WIA, WIB, and TIA students returned to school as the economy forced many companies in the area to lay off workers. This may have contributed to a larger number of workers with needs for transitional/remedial courses which adversely affected the retention rates. According to data available from the BCTC Retention Committee individuals with low Reading, Writing, and Mathematics scores have higher dropout rates historically. The figures will be monitored in the coming reporting period.</p>
<b>Dean</b>	
<b>Vice President</b>	EET is another strong program with dedicated faculty, including the Coordinator and Assistant Dean. I am pleased that the ratio of full-time equivalent students to full-time equivalent faculty has remained a respectable 13.3.

**Comments (2013-2014)**

<b>Roles</b>	<b>Comments</b>
<b>Coordinator</b>	
1. Strengths of the Program	The Engineering and Electronics Technology program continues to maintain strong enrollment and graduated approximately 20 AAS students this year. Our advisory committee continues to support the program and the current mission. We have had increasing attendance in the number of advisors attending the meetings and providing feedback to the program on technologies they are seeing in the field. Student satisfaction remains at 100% and employer satisfaction has increased from 50% (1/2) to 100% (8/8). Equipment has been purchased through Perkins funding to maintain industry standard equipment training. The percentage of students employed in the field has also increased from 75% to 86% this year. The new Engineering and Electronics capstone course, where students review the materials in the program and take a national test (NOCTI) for assessing student outcomes, has seen a 100% pass rate. Passing the exam is based on a cut-score set by NOCTI. The capstone enrollment has doubled as more students are required to take it. We are also allowing students from around the state to take the course online. The fact that other KCTCS colleges are encouraging their students to take our capstone class speaks highly of the quality and caliber of the program faculty.
2. Items Requiring Continued Attention	Our current enrollment has dropped from 130 students to 101 students. We attribute this drop to students being initially placed in a different program. Many of our students seek multiple degrees within the division. The fact that the number of AAS degrees has not declined indicates our student enrollment has remained relatively stable. The number of diplomas and certificates has decreased slightly. The diplomas now require a co-op class to earn that credential. We will continue to encourage students to take the co-op class to earn the diploma, but many would prefer to take other classes and earn the AAS degree.
3. Document and provide evidence indicating how last year's program review resulted in improvements in the program.	Student learning outcomes have been positive in many aspects. We have taken the areas we have focused on and tried to improve upon those areas. One area of note from last year was the purchase and installation of the Lab-Volt software for use by faculty and students. We did MET this objective, however, the software is installed but has not been utilized. This may be something we will use in the upcoming IET program. The hindrance of the software is its very close tie to the Lab-Volt hardware lab boards. Without those in each classroom, the software does not serve our purposes fully. The NOCTI exam is being used to gauge learning outcomes, and map out areas needing improvement in the program. We

	have seen a few areas of the NOCTI that need improvement and are working hard to highlight those areas. Upon results of this year's NOCTI, content will be added to the review capstone course to help in increasing those areas further.
<b>Assistant Dean</b>	The Engineering and Electronics Technology program continues to have high scores for Student Satisfaction (100%) and Employer Satisfaction for Technical classes/proficiency (100%), and Employer Satisfaction for General Education courses (100%) for the reporting period. The reported Job placement figures have increased from 42.9% for the 2010 2011 school year, to 75% for the 2012-2013 school year, to 86% for the 2013-2014 school year. Manufacturing in the Bluegrass Region has rebounded since a low in 2010. It is forecast to remain strong and even increase in the next reporting period. The Engineering Technology program continues to have strong enrollment and a high number of credentials issued for the reporting period. According to the KCTCS 2011 2012 Fact Book the program issued 257 credentials which included associate degrees, diplomas, and certificates in the reporting period. This is consistent with the last several years. The program issued 247 credentials in 2009-2010 and 273 for the 2010-2011 reporting period. The 2011-2012 figure accounts for 7.2% of all credentials issued by Bluegrass Community and Technical College for the reporting period. Please see below. <a href="http://www.kctcs.edu/About_KCTCS/KCTCS_Factbook/2012-13_Fact_Book.aspx">http://www.kctcs.edu/About_KCTCS/KCTCS_Factbook/2012-13_Fact_Book.aspx</a>
<b>Dean</b>	Agree fully with AD and coordinator comments. Knowledgeable faculty, strong industry support. High graduation rate and satisfied graduates. Excellent program with good advisory committee support.
<b>Vice President</b>	I agree with Assistant Dean and Dean comments. The college's fiscal realities will necessitate a close look at this program to determine how we can effectively and efficiently meet student and industry needs. The hope is that this program will be located only in Danville and Georgetown within three years.

### Comments (2014-2015)

Roles	Comments
<b>Coordinator</b>	
1. Strengths of the Program	The Engineering and Electronics Technology program continues to maintain strong enrollment and graduated approximately 16 AAS students, and 14 Diplomas this year. Our advisory committee continues to support the program and the current mission. We have had increasing attendance in the number of advisers attending the meetings and providing feedback to the program. Student satisfaction remains at 100%. Employer satisfaction is more difficult to gauge with 0 responses but employment information from our advisory committee is positive, and that tied to the employment rate of 93%, 86% in the field would hold that employer satisfaction is strong. . The new Engineering and Electronics capstone course, where students review the materials in the program and take a national test (NOCTI) for assessing student outcomes, has seen a 100% pass rate. Passing the exam is based on a cut-score set by NOCTI. The capstone enrollment continues to increase as more students are required to take it. We are also allowing students from around the state to take the course online. The fact that other KCTCS colleges are encouraging their students to take our capstone class speaks highly of the quality and caliber of the program faculty. The capstone course will also improve employer satisfaction for BCTC students. Perkins funding continues to provide equipment and training BCTC to maintain and improve meeting industrial standards. This year Perkins provided for solar energy training FANUC robot software training.
2. Items Requiring Continued Attention	Our current enrollment has increases from 101 students to 106 students. This slight improvement indicates a positive trend that we feel will continue into the next year. The number of AAS degrees awarded dropped from 20 to 16 but should also increase with the increase in students entering the program. Many of our students seek multiple degrees within the division and some variation in degrees awarded by each program would be reflected up or down in this. The number of diplomas and certificates has also decreased with the decrease of AAS degrees and should also improve with student numbers. Part of the decrease in diplomas can be attributed to the added requirement of a co-op to earn that credential so fewer students are opting for it, and instead prefer to take additional classes and earn the AAS degree.

3. Document and provide evidence indicating how last year's program review resulted in improvements in the program.	Student learning outcomes have been positive in many aspects and we continue to look at areas that we can focus on and improve. We have added equipment and training with FANUC robots and programming. We have added alternative energy certificates in wind and solar energy. The NOCTI exam is being used to gauge learning outcomes, and map out areas needing improvement in the program. We have seen a few areas of the NOCTI that need improvement and are working hard to highlight those areas. Upon results of this year's NOCTI, content will be added to the review capstone course to help in increasing those areas further.
<b>Assistant Dean</b>	The Engineering and Electronics Technology program continues to have high scores for Student Satisfaction (100%) for the reporting period. The reported Job placement figures have increased from 86% for the 2013-2014 school year to 93% during the 2014-2015 year. The Engineering Technology program continues to have strong enrollment and a high number of credentials issued for the reporting period. The advisory committee is involved and engaged. Student scores on the NOCTI exam continue to be above the state and national averages.
<b>Dean</b>	Healthy program with good student enrollment, graduation and job placement. Faculty excellent and major factor in this strong program with active advisory board.
<b>Vice President</b>	I concur with Assistant Dean and Dean comments. I encourage faculty to embrace the Core Manufacturing Exercise discussion that is beginning within the division. Like with all other technical programs, I encourage the program to consider additional apprenticeship and other industry sponsorship opportunities.