

## **POST-AUDIT REVIEW**

**For Occupational Programs  
Implemented Under the Provisions of Series 37 of the  
West Virginia Council for Community and Technical College Education**

**Institution:** Southern West Virginia Community and Technical College  
**Program:** Industrial Technology, Certificate

April 2017

**POST-AUDIT REVIEW**  
**Southern West Virginia Community and Technical College**

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**Program:** Industrial Technology, Certificate

**I. Introduction**

The Industrial Technology Certificate Program is designed to provide basic skills in a variety of applied industrial careers which can lead to entry-level positions and provides a smooth transition into an associate degree program or high technology field.

Southern West Virginia Community and Technical College (Southern) currently offers two options under the Industrial Technology umbrella, Mechatronics and Welding. Southern previously had a welding program, but it was run through a career and technical center and enrollment had declined. This post-audit review addresses the revitalization of the welding program and the introduction of the mechatronics program. Both the welding program revitalization and mechatronics program introduction were jumpstarted by grants.

Grants, WV Advance-Welding Technology and WV Advance Mechatronics Technology, were received in 2014. These grants provided equipment which was purchased and installed at the Williamson Campus, creating a dedicated welding lab and a dedicated mechatronics lab.

Welding (WL) classes began to be offered in spring of 2015. Mechatronics students began taking electrical engineering technology classes in the fall of 2014 and mechatronics (MX) classes in the spring of 2015. The complete program for both options is available at Southern's Williamson Campus. The general education component for each program can be taken at any of Southern's campuses.

**II. Goals and Objectives**

The Industrial Technology program serves a definite need at Southern. It allows Southern to be responsive to changing needs in its service area by quickly introducing a new option to meet the new demand. The current options were identified as needed by displaced workers and supported by the TAACCCT 3 grant. The goal of the grant is to provide displaced workers an opportunity to learn new skills and be employable in in-demand fields. The mechatronics and welding options support this overarching goal by providing a steppingstone along a path to an associate degree. The welding option also provides a credential for those who have shown a certain level of achievement across the breadth of welding and wish to obtain employment with the certifications they possess.

### III. Assessment

- A. Assessment of the mechatronics option occurs primarily at the course level. In addition, mechatronics is incorporated into the college's assessment program. Regular assessment of program goals is made. Curricular changes have been made in response to identified needs.

Assessment of the welding program begins at the course level. Students progress to earning certifications in specific processes and positions. Students who pass particular courses earn skill set certificates. These steps lead to the Industrial Technology Certificate – Welding Option. In addition, students participate in Southern's assessment program. Weldments have been displayed during Southern's Assessment Showcase to illustrate the kinds of work done in the program. Curricular changes have been made as a result of identified needs.

- B. The primary goal of the welding program is to prepare students to enter the field of welding. The graduate will be able to select the correct equipment and filler metals. The graduate will also be able to perform proper pre-, intermediate-, and post-heat treatment of welded metals as well as perform proper weld techniques.

The student performance is measured by visual inspection of welds, non-destructive testing and destructive testing. Sample coupons are bend tested to industry standards, evaluated for failures, and stored securely for future reference.

- C. Assessment of student performance in welding has led to programmatic changes. Early results led to the evaluation of the math course selected for the program. It was determined the goals of the Technical Math course were not well-aligned with the needs of the welding program. Math faculty worked with welding faculty and others to identify the key math competencies needed by welders. A course was developed and textbook selected that will much better meet the needs of the welding program and related technical programs.

Another change was the sequencing of some of the supporting general education courses used in the program. Originally, the Welding AAS degree had Speech Fundamentals occurring in the second semester and Computer Literacy in the fourth semester. Assessment information indicated students needed the computer literacy skills much earlier in the program. In order to accommodate the sequencing change in the associate degree, the certificate curriculum was changed. Computer Literacy replaced Speech Fundamentals so that the certificate would remain wholly contained within the associate degree.

## IV. Curriculum

- A. The curriculum for both the welding option and mechatronics options consists of a total of 30 credit hours. Each option includes ten hours of general education classes (Component I in Appendix I) with the remaining 20 being specialization courses specific to a particular option (Component II in the appendix). Seventeen of the 20 specialization hours in the welding option are required leaving three credit hours as a welding-specific elective. The mechatronics option has no electives. All 20 hours are specifically required.

Southern has an open-door admission policy. Any person with a high school diploma or GED may take classes at Southern. All entering students will use ACT scores or take a placement test to be placed in the proper math and English courses. Southern utilizes a co-curricular model for delivery of remedial math and English. Southern has had good success in helping students elevate their abilities to be a success in college-level math and English. Use of the co-curricular model helps students to complete the certificate program on time (two semesters).

Upon completing the degree requirements, students will have the necessary knowledge and skills to be successful in some entry-level positions in the industry that require some education and training beyond high school. Students will also have an understanding of the importance of life-long learning and the need to continually upgrade their skills. Since this program is contained wholly within the associate degree program, it allows students to seamlessly continue toward an associate degree.

Each option of the Industrial Technology Certificate program is aligned with its respective Associate in Applied Science degree so that it can serve as the first year of the associate degree program. The certificate program is contained wholly within the associate degree program.

Southern offers American Welding Society certifications in particular processes and positions. This program serves the needs of the area. These certifications are the primary goal of many welding students. Appendix III contains a table showing the certifications earned through the fall 2016 semester.

- B. The list of courses that make up each option can be found in Appendix I.
- C. While certain general education courses have the option to be taken online, all general education classes can be taken face-to-face. All specialization courses for both the welding and mechatronics options are taken face-to-face.

## **V. Faculty**

All mechatronics classes have been taught by full-time faculty.

In the 201602 semester, 55% of Welding classes were taught by full-time faculty. This is the lowest percent taught by full-time faculty in any semester and was necessitated by medical leave on the part of a full-time faculty member. The percent of sections taught by full-time faculty in 201701 and 201702 was 88% and 70% respectively.

None of the faculty teaching mechatronics or welding classes are tenure-track. All faculty are well-qualified to teach their respective discipline through credentialing or being a recognized expert in the field.

## **VI. Enrollment and Graduates**

A. Appendix III shows the program major headcount and associated mechatronics class FTE and welding class FTE. For the last three semesters, the headcount in the mechatronics option has been over 15. The FTE produced by mechatronics classes varies by sequencing of mechatronics classes within the program.

Welding student headcount has shown significant growth over the review period and stands at 38 for the current semester. FTE produced by welding classes has been at 17 or above for the last four semesters.

Both these programs show few graduates. The majority of mechatronics students are in the Mechatronics Associate in Applied Science program and do not apply for the certificate along the way. Many welding students take classes to achieve particular certifications and stop out when their educational goals have been met.

B. Three of the four graduates surveyed responded (2 from mechatronics, 2 from welding). It is known that the individual who did not respond to the formal graduate survey is continuing his education. All respondents stated they were satisfied with the education experience at Southern. The information is summarized in a table in Appendix III.

C. Neither the mechatronics nor welding option is designed to prepare students to enter a baccalaureate program. However, a spring 2017 mechatronics graduate plans to enter an engineering management program in the fall.

## **VII. Financial**

- A. The Mechatronics and Welding options under the Industrial Technology Certificate are contained wholly within their respective associate degrees. As such, there is no cost to the institution to offer the certificate degree.
- B. Equipment has been purchased and installed to get both programs up and running. Welding has an ongoing need for supplies which is covered by course fees, currently \$50 per credit hour. The largest expense is faculty salary which will come from institutional funds.

## **VIII. Advisory Committee**

The following people have participated in advisory committee meetings during the review period:

Levi Durfee - Bulldog Creative Services  
Tadd Fortner - Bulldog Creative Services  
Justin Kirk - Thornhill Automotive Group  
Steve Williamson - Wright Concrete  
Randy Curry - Southern Equipment

During the 2015 meeting, members reviewed the curricula for welding and mechatronics. They approved of what we presented. The relevant conversation in 2016 centered on how knowledge of mechatronics could help workers, especially at Wright Concrete. Those assembled encouraged us to continue to emphasize robotics in our curriculum.

## **IX. Accreditation**

There is no special accreditation information for either of these two options under the Industrial Technology Certificate.

## **Appendix I Curriculum**

**Industrial Technology Program  
Certificate Degree  
Welding Option**

**Component I – General Education: 10 credit hours**

EN 101 or EN 101A	~English Composition I	3 credit hours
MT 121	~College Mathematics for General Education	3 credit hours
or		
MT 121A	~College Mathematics for General Education, Enhanced	
OR 105	Orientation to Technical Programs	1 credit hour
SP 103	~Speech Fundamentals	3 credit hours

**Component II – Specialization: 20 credit hours**

WL 100	Oxyacetylene Welding (OAW)	4 credit hours
WL 102	Fundamentals of Welding	4 credit hours
WL 103	Blueprint Reading and Metallurgy	3 credit hours
WL 104	Shielded Metal Arc Welding (SMAW)	3 credit hours
WL 210	Commercial and Industrial Welding Practices	3 credit hours
	<sup>1</sup> Welding Elective	3 credit hours

<sup>1</sup>Choose from: WL 201, WL 202, or WL 203.

~ Designates courses on the statewide Core Coursework Transfer Agreement.



**Industrial Technology Program  
Certificate Degree  
Mechatronics Option**

**Component I – General Education: 10 credit hours**

EN 101 or EN 101A	~English Composition I	3 credit hours
MT 124	Technical Math	3 credit hours
or		
MT 124A	Technical Math, Enhanced	
OR 105	Orientation to Technical Programs	1 credit hour
SP 103	~Speech Fundamentals	3 credit hours

**Component II - Specialization: 20 credit hours**

EG 103	Electrical Calculations	3 credit hours
EG 105	Industrial Safety	1 credit hour
EG 107	Introduction to Circuits	4 credit hours
MX 110	Introduction to Mechatronics	2 credit hours
MX 120	Mechanical Power I	2 credit hours
MX 130	Fluid Power I	2 credit hours
MX 180	PLC Fundamentals	1 credit hour
MX 184	PLC Interfacing and HMIS	1 credit hour
MX 186	PLC Applications	1 credit hour
MX 190	Industrial Robotics	3 credit hours

~ Designates courses on the statewide Core Coursework Transfer Agreement.

## **Appendix II Faculty Data**

## Faculty Data

Name Sheridan Taylor Rank Welding Instructional Specialist

Check one:

Full-time  Part-time  Adjunct  Graduate Asst.

Highest Degree Earned \_\_\_\_\_

Date Degree Received \_\_\_\_\_

Conferred by \_\_\_\_\_

Area of Specialization Welding Technology

Professional registration/licensure AWS Certified Welding Educator

Yrs of employment at present institution 3

Yrs of employment in higher education 3

Yrs of related experience outside higher education 37

Non-teaching experience 33

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 & Title	Enrollment
Spring 2015	WL 100-Oxyacetylene Welding	15
Spring 2015	WL 103-Blueprint Reading & Metallurgy	13
Spring 2015	WL 104-Shield Metal Arc Welding	16
Spring 2015	WL 201-Gas Metal Arc Welding	3
Summer 2015	WL 100-Oxyacetylene Welding	3
Summer 2015	WL 102-Fundamentals of Welding	3
Summer 2015	WL 201-Gas Metal Arc Welding	6
Summer 2015	WL 203-Flux-Core Arc Welding	6
Summer 2015	WL 262-Adv. Shielded Metal Arc Welding	5
Fall 2015	WL 100-Oxyacetylene Welding	15
Fall 2015	WL 102-Fundamentals of Welding	40
Fall 2015	WL 103-Blueprint Reading & Metallurgy	19
Fall 2015	WL 210-Commercial & Industrial Welding Practices	8
Fall 2015	WL 262-Adv. Shielded Metal Arc Welding	4
Fall 2015	WL 264-Adv. Gas Metal Arc Welding	4
Spring 2016	WL 100-Oxyacetylene Welding	7
Spring 2016	WL 102-Fundamentals of Welding	10
Spring 2016	WL 202-Gas Tungsten Arc Welding	10

<b>Year/Semester</b>	<b>Course Number &amp; Title</b>	<b>Enrollment</b>
Spring 2016	WL 266-Adv. Gas Tungsten Arc Welding	6
Spring 2016	WL 272-Adv. Flux-Core Arc Welding	5
Spring 2016	WL 275-Special Topics in Welding Capstone Course	4
Summer 2016	WL 210-Commercial & Industrial Welding Practices	1
Summer 2016	WL 262-Adv. Shielded Metal Arc Welding	1
Summer 2016	WL 264-Adv. Gas Metal Arc Welding	1
Summer 2016	WL 272-Adv. Flux-Core Arc Welding	1
Fall 2016	WL 100-Oxyacetylene Welding	10
Fall 2016	WL 102-Fundamentals of Welding	12
Fall 2016	WL 201-Gas Metal Arc Welding	8
Fall 2016	WL 202-Gas Tungsten Arc Welding	3
Fall 2016	WL 203-Flux-Core Arc Welding	5
Fall 2016	WL 264-Adv. Gas Metal Arc Welding	8
Fall 2016	WL 266-Adv. Gas Tungsten Arc Welding	1
Fall 2016	WL 272-Adv. Flux-Core Arc Welding	9
Fall 2016	WL 275-Special Topics in Welding Capstone Course	2
Spring 2017	WL 102-Fundamentals of Welding	8
Spring 2017	WL 210-Commercial & Industrial Welding Practices	18
Spring 2017	WL 262-Adv. Shielded Metal Arc Welding	17
Spring 2017	WL 264-Adv. Gas Metal Arc Welding	4
Spring 2017	WL 266-Adv. Gas Tungsten Arc Welding	6
Spring 2017	WL 272-Adv. Flux-Core Arc Welding	2
Spring 2017	WL 275-Special Topics in Welding Capstone Course	4

- (b) If degree is not in area of current assignment, explain.  
Mr. Taylor also taught 6 years at the county career and technical education center.
- (c) Identify your professional development activities during the past five years.

### Faculty Data

Name James Brown Jr. Rank N/A

Check one:

Full-time  Part-time  Adjunct  Graduate Asst.

Highest Degree Earned: Associate of Science

Date Degree Received: May, 1971

Conferred by: Marshall University

Area of Specialization: Mining Technology

Professional registration/licensure: \_\_\_\_\_

Yrs of employment at present institution: 1.5

Yrs of employment in higher education: 1

Yrs of related experience outside higher education: 50

Non-teaching experience: 50

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 & Title	Enrollment
Spring 2016	WL 103-Blueprint Reading & Metallurgy	8
Spring 2016	WL 104-Shield Metal Arc Welding	8
Spring 2016	WL 201-Gas Metal Arc Welding	11
Spring 2016	WL 202-Gas Tungsten Arc Welding	10
Spring 2016	WL 203-Flux-Core Arc Welding	10
Spring 2016	WL 266-Adv. Gas Tungsten Arc Welding	6
Spring 2016	WL 275-Special Topics in Welding Capstone Course	4
Fall 2016	WL 103-Blueprint Reading & Metallurgy	10
Fall 2016	WL 104-Shield Metal Arc Welding	12
Spring 2017	WL 104-Shield Metal Arc Welding	7
Spring 2017	WL 201-Gas Metal Arc Welding	13

- (b) If degree is not in area of current assignment, explain.
- (c). Identify your professional development activities during the past five years.

### Faculty Data

Name Jamie Jones Rank N/A

Check one:

Full-time \_\_\_\_\_ Part-time \_\_\_\_\_ Adjunct X Graduate Asst. \_\_\_\_\_

Highest Degree Earned: High School Diploma

Date Degree Received: May, 1990

Conferred by: Buffalo Wayne High School

Area of Specialization Welding Technology

Professional registration/licensure \_\_\_\_\_

Yrs of employment at present institution 0.5

Yrs of employment in higher education 0.5

Yrs of related experience outside higher education 17

Non-teaching experience 17

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 & Title	Enrollment
Spring 2017	WL 104-Shield Metal Arc Welding	8

- (b) If degree is not in area of current assignment, explain
- (c) Identify your professional development activities during the past five years.

## Faculty Data

Name Steven White Rank Instructor Specialist

Check one:

Full-time X Part-time \_\_\_\_\_ Adjunct \_\_\_\_\_ Graduate Asst. \_\_\_\_\_

Highest Degree Earned: Masters Degree

Date Degree Received: 5/2006

Conferred by: University of Fayetteville Arkansas

Area of Specialization: Operations Management Safety Management

Professional registration/licensure: Yes

Yrs of employment at present institution: 5

Yrs of employment in higher education: 11

Yrs of related experience outside higher education: 33

Non-teaching experience: 22

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 & Title	Enrollment
Spring 2013	CS 102-Computer Literacy	19
Spring 2013	DR 204-Computer Aided Design and Drafting I	7
Spring 2013	EG 123-Electrical Schematics	14
Fall 2014	DR 204-Computer Aided Design and Drafting I	11
Fall 2014	EG 123-Electrical Schematics	5
Spring 2015	EG 105-Industrial Safety	5
Spring 2015	MX 110-Introduction to Mechatronics	5
Spring 2015	MX 120-Mechanical Power I	3
Spring 2015	MX 130-Fluid Power I	2
Spring 2015	MX 180-PLC Fundamentals	2
Spring 2015	MX 186-PLC Applications	2
Spring 2015	ST 110-Industrial Safety and Risk Management	5
Summer 2015	DR 204-Computer Aided Design and Drafting I	3

<b>Year/Semester</b>	<b>Course Number &amp; Title</b>	<b>Enrollment</b>
Fall 2015	OR 105-Orientation to Technical Programs	8
Fall 2015	OR 105-Orientation to Technical Programs	27
Fall 2015	EG 103-Electrical Calculations	19
Fall 2015	EG 105-Industrial Safety	9
Fall 2015	EG 107-Introduction to Circuits	17
Fall 2015	MX 110-Introduction to Mechatronics	5
Fall 2015	MX 130-Fluid Power I	5
Fall 2015	MX 220-Mechanical Power II	2
Spring 2016	EG 105-Industrial Safety	13
Spring 2016	EG 107-Introduction to Circuits	13
Spring 2016	MX 110-Introduction to Mechatronics	19
Spring 2016	MX 130-Fluid Power I	36
Spring 2016	MX 190-Industrial Robotics	14
Spring 2016	MX 230-Fluid Power II	12
Spring 2016	TS 275-Special Topics, Mechatronics Capstone Course	2
Fall 2016	DR 204-Computer Aided Design and Drafting I	14
Fall 2016	EG 171-Circuit Analysis I	7
Fall 2016	EG 214-Electrical Control Systems	21
Fall 2016	MX 220-Mechanical Power II	8
Fall 2016	MX 298-System Design-Mechatronics Program Capstone Course	3

- (b) If degree is not in area of current assignment, explain.
- (c). Identify your professional development activities during the past five years.



## Faculty Data

Name: Aaron St.Clair Rank Instructor

Check One:

Full-time X Part-time \_\_\_\_\_ Adjunct

Highest Degree Earned: Bachelor of Science

Date Degree Received \_\_\_\_\_

Conferred by: West Virginia University Institute of Technology

Area of Specialization: Computer Science

Professional registration/licensure: none

Yrs of employment at present institution: one

Yrs of employment in higher education: one

Yrs of related experience outside higher education: five

Non-teaching Experience: programming, systems engineering, project management

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/Title	Enrollment
Fall 2014	CS 102 Computer Literacy	53
Fall 2014	CS 103 Introduction to Applications	24
Spring 2015	CS 102 Computer Literacy	77
Spring 2015	EG 103 Electrical Calculations	3
Spring 2015	EG 107 Introduction to Circuits	4
Summer 2015	MX 190 Industrial Robotics	1

- (b). If degree is not in area of current assignment, explain.
- (c). Identify your professional development activities during the past five years.

Graduate course work at Marshall in Information Systems.  
 Quality Matters and Blackboard Training and certifications.  
 Siemens Training course for SIMATIC.

## Faculty Data

Name John Evans Rank Instructional Specialist

Check one:

Full-time X Part-time \_\_\_\_\_ Adjunct \_\_\_\_\_ Graduate Asst. \_\_\_\_\_

Highest Degree Earned: Bachelor of Science

Date Degree Received 8/1974

Conferred by: West Virginia Institute of Technology

Area of Specialization: Electrical Engineering

Professional registration/licensure: Certified Electrical Engineer

Yrs of employment at present institution: 1.5

Yrs of employment in higher education: 1.5

Yrs of related experience outside higher education: 41

Non-teaching experience: 41

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 & Title	Enrollment
Fall 2015	EG 103-Electrical Calculations	1
Fall 2015	EG 107-Introduction to Circuits	1
Fall 2015	EG 105-Industrial Safety	1
Fall 2015	EG 123-Electrical Schematics	1
Fall 2015	MX 120-Mechanical Power I	1
Fall 2015	MX 250-Basic Instrumentation	1
Spring 2016	EG 103-Electrical Calculations	14
Spring 2016	MX 120-Mechanical Power I	16
Spring 2016	MX 130-Mechanical Power II	2
Spring 2016	MX 180-PLC Fundamentals	15
Spring 2016	MX 184-PLC Interfacing and HMIS	15
Spring 2016	MX 186-PLC Applications	15

<b>Year/Semester</b>	<b>Course Number &amp; Title</b>	<b>Enrollment</b>
Spring 2016	MX 250-Basic Instrumentation and Control	8
Spring 2016	MX 254-Adv. Instrumentation and Control	7
Summer 2016	MX 140-Manufacturing Processes I	6
Summer 2016	TS 275-Special Topics, Control Loop Tuning & Instrumentation	1
Fall 2016	EG 103-Electrical Calculations	33
Fall 2016	EG 105-Industrial Safety	36
Fall 2016	EG 123-Electrical Schematics	6
Fall 2016	MX 120-Mechanical Power I	7
Fall 2016	MX 230-Fluid Power II	7
Fall 2016	MX 250-Basic Instrumentation & Control	12
Fall 2016	OR 105-Orientation to Technical Programs	8
Spring 2017	MX 110-Introduction to Mechatronics	6
Spring 2017	MX 120-Mechanical Power I	5
Spring 2017	MX 130-Fluid Power I	10
Spring 2017	MX 140-Manufacturing Processes I	5
Spring 2017	MX 190-Industrial Robotics	6
Spring 2017	MX 254-Advanced Instrumentation and Control	7
Spring 2017	MX 256-Control Loop Tuning & Wireless Communication	5
Spring 2017	MX 298-Mechatronics System Design Capstone Course	7

- (b) If degree is not in area of current assignment, explain.
- (c) Identify your professional development activities during the past five years.

## Faculty Data

Name William Moseley Rank Instructor

Check one:

Full-time X Part-time \_\_\_\_\_ Adjunct \_\_\_\_\_ Graduate Asst. \_\_\_\_\_

Highest Degree Earned: Bachelor of Science

Date Degree Received: 05/1973

Conferred by: West Virginia Institute of Technology

Area of Specialization: Electrical Engineering

Professional registration/licensure: \_\_\_\_\_

Yrs of employment at present institution: 8

Yrs of employment in higher education: 8

Yrs of related experience outside higher education: 33

Non-teaching experience: 30

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 & Title	Enrollment
Fall 2012	EG 103-Electrical Calculations	18
Fall 2012	EG 105-Industrial Safety	17
Fall 2012	EG 107-Introduction to Circuits	18
Fall 2012	EG 171-Circuit Analysis I	16
Fall 2012	EG 181-Analog Electronics	10
Fall 2012	EG 214-Electrical Controlled Systems	10
Spring 2013	EG 172-Circuit Analysis II	13
Spring 2013	EG 214-Electrical Control Systems	13
Spring 2013	EG 220-Machines and Power Systems	8
Spring 2013	EG 296-Program Logic Control	6
Spring 2013	EG 297-National Electric Code	9
Fall 2013	EG 103-Electrical Calculations	15
Fall 2013	EG 105-Industrial Safety	15
Fall 2013	EG 107-Introduction to Circuits	16
Fall 2013	EG 181-Analog Electronics	9
Fall 2013	EG 220-Machines and Power Systems	9
Fall 2013	EG 296-Program Logic Control	10
Fall 2013	EG 297-National Electric Code	11
Spring 2014	EG 123-Electrical Schematics	14

<b>Year/Semester</b>	<b>Course Number &amp; Title</b>	<b>Enrollment</b>
Spring 2014	EG 171-Circuit Analysis I	11
Spring 2014	EG 172-Circuit Analysis II	10
Fall 2014	EG 103-Electrical Calculations	27
Fall 2014	EG 105-Industrial Safety	24
Fall 2014	EG 107-Introduction to Circuits	22
Fall 2014	EG 214-Electrical Control Systems	10
Fall 2014	EG 296-Program Logic Control	10
Fall 2014	EG 297-National Electric Code	2
Spring 2015	EG 123-Electrical Schematics	22
Spring 2015	EG 171-Circuit Analysis I	20
Spring 2015	EG 220-Machines and Power Systems	8
Spring 2015	EG 275-Special Topics, Intro to Residential Wiring	3
Spring 2015	EG 275-Special Topics, Commercial Wiring	16
Spring 2015	EG 297-National Electric Code	16
Summer 2015	EG 275-Special Topics, Intro to Residential Wiring	3
Fall 2016	EG 107-Introduction to Circuits	11
Fall 2016	EG 172-Circuit Analysis II	8
Fall 2016	EG 298-Electrical Engineering Technology Capstone Course	4
Spring 2017	OR 105-Orientation to Technical Programs	13
Spring 2017	EG 171-Circuit Analysis I	13
Spring 2017	EG 172-Circuit Analysis II	9
Spring 2017	EG 220-Machines and Power Systems	4
Spring 2017	EG 290-Digital Electronics	3
Spring 2017	MX 180-PLC Fundamentals	7
Spring 2017	MX 184-PLC Interfacing and HMIS	7
Spring 2017	MX 186-PLC Applications	7

- (b) If degree is not in area of current assignment, explain.
- (c). Identify your professional development activities during the past five years.

**Appendix III  
Enrollment and Graduates**

## Industrial Technology Certificate Program

### Mechatronics Option

Semester	Certificate Degree Majors	MX Class FTE	Nonduplicate Student Headcount	Program Graduates
201501	0	NA	0	0
201502	1	1.73	5	0
201601	2	0.40	8	0
201602	3	12.6	33	2
201701	0	0.93	16	3
201702	0	6.40	19	TBD

### Welding Option

Semester	Certificate Degree Majors	WL Class FTE	Nonduplicate Student Headcount	Program Graduates
201501	3	NA	0	0
201502	4	8.67	14	0
201601	4	17.33	26	0
201602	3	17.53	22	2
201701	7	17.47	31	0
201702	10	18.40	38	TBD

## American Welding Society Certifications Earned

Welding Process	Test Description	Position	Earned Total
FCAW	Plate Test Down Hill		
FCAW	Plate Test Up Hill	2G, 3G, 4G	2
FCAW	Pipe Test Down Hill		
FCAW	Pipe Test Up Hill		
GMAW	Plate Test Down Hill		
GMAW	Plate Test Up Hill	2G, 3G, 4G	3
GMAW	Pipe Test Down Hill		
GMAW	Pipe Test Up Hill		
GTAW	Plate Test Down Hill		
GTAW	Plate Test Up Hill	2G, 3G, 4G	1
GTAW	Plate Test Up Hill	6G	1
GTAW	Pipe Test Down Hill		
GTAW	Pipe Test Up Hill	6G	1
SMAW	Plate Test Down Hill		
SMAW	Plate Test Up Hill	2G, 3G, 4G	6
SMAW	Pipe Test Down Hill	6G	1
SMAW	Pipe Test Up Hill	6G	4
<b>Total</b>			<b>19</b>



## Graduate Data for Industrial Technology Certificate

<b>Surveyed</b>	<b>Responded</b>	<b>Salary</b>	<b>Satisfied w/Edu. Exp.</b>
Mech Cert Grad 1	No	\$0 Cont. Edu.	NA
Mech Cert Grad 2	Yes	NA	Yes
Welding Cert Grad 1	Yes	NA	Yes
Welding Cert Grad 2	Yes	\$0 Cont. Edu	Yes