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## **Introductory overview of program**

(To provide your SME with a preliminary orientation to your program, this one- or two-page overview should *briefly* describe.)

### **Electronics Technology Certificate Program**

#### **PROGRAM SPECIFICS:**

**CIP Code:** 47.0105

**Credits associated with ETC:** 30

**Certificate:** Electronics Technology Certificate

#### **Industry Certifications:**

DC Basics Certification

AC Basics Certification

Analog Basics Certification

**Delivery Methods:** Face-to-Face, Online, Hybrid

Students enrolled in the Electronics Technology Certificate Program will gain first-hand experience of the basic concepts of electricity and electronic control. This program will help prepare students for the Electronics Technicians Association (ETA) DC Basics Certification, AC Basics Certification, and Analog Basics Certification. Graduates of this program can expect to find employment as electrical technicians, i.e., technicians who install, troubleshoot, repair, service, and maintain electrical control systems in manufacturing and service industries.

After completion of the Electronics Technology Certificate Program, students will have the opportunity to pursue an Associate of Applied Science in Electronics Technology Degree. With this opportunity, students will build on their electrical skills in automation programming and industrial robotics control. After completing the program, students will be ready to apply these skills in the workplace in a variety of potential careers.

- **ETC development and/or enhancement evolution:**

The ETC program at Jefferson College originally was designed as a face-to-face format, after determining that students entering the Electronics Program had been unable to attain credentials between initiation of studies and the AAS Degree. This in turn limited the students' ability to attain gainful employment during progress to the AAS completion. It was determined that a ladder approach would work best to meet the needs of students through MoSTEMWINS. Additionally, the course sequence and daytime offerings did not allow those seeking the skills to attend class, thus we needed to redesign it into a hybrid format, and meet once a week. We offered two sections of each course, so we could meet the students' needs for day or night. With these changes, we have met the needs of approximately 20-30 students. As this program is still in progress a definite count has yet to be made.

- **Challenges encountered in developing or launching it** (change of focus resulting from post-award industry partner discussions, recruitment issues, changes in regional job market demand, difficulty finding qualified instructors, etc.):

The greatest challenge that we've faced with the ETC program is finding and keeping qualified instructors to teach the courses. Business and industry also has great need for qualified professionals in the Electronics Industry, with the aforementioned certifications. Thus they can offer higher salaries and competitive benefits, luring potential instructors away from education. Adjunct instructors are equally difficult to find.

- **Information on current status of and plans for the program;**

Due to recent budget cuts from the Missouri Governor's office, the college has been forced to suspend programs with growth challenges. The ETC Program falls within such guidelines, and therefore plans for continuation have been cut, as have salaries associated with this program's faculty.

- **Any other pertinent information** that would help orient the SME to your program prior to document review.

N/A

### **Curriculum Map**

For multi-course programs, provide a crosswalk between program or student learning outcomes and courses indicating where outcomes are introduced, reinforced and mastered. For single-course programs, provide a crosswalk between course objectives and units. *See different templates and examples for a multi-course program and a single-course program.*

***See following document.***

### **Program Career Ladder or Stackable Credential Information**

Descriptive or graphic depiction of how students in your program can move up a career ladder through the acquisition of skills and certifications. *See MCC Manufacturing Careers and Career Map examples (MoMan Career Map, MCC.pdf)*

***See ETC Job Tree***

### **Syllabus**

A syllabus (for each course in the program) that includes course objectives, prerequisites, course length (# of days or weeks), class/course hours and delivery method/s.

***See JC/ETC Syllabi***

### **Instructional Materials**

List of all textbooks, manuals, websites, ancillary materials and major laboratory tools and equipment. *See template and example.*

***List attached.***

### **Overview Table of Objectives, Modules, Learning Activities, Assessments**

Complete a table for *each course developed or enhanced with grant funds*, capturing in sufficient detail sample learning activities and assessments that best showcase your curriculum. *See template and example.*

***Attached documents.***

## **Statement of Programmatic Innovation and/or Enhancement**

Provide a one- or two-page document describing specific examples of how the program incorporates one or more of the MoSTEMWINs key strategies:

### ***1) Accelerate Entry into Career Programs - Refine assessment, transform developmental education and add support services to meet the needs of participants.***

The Electronics Technology Certificate program supports student efforts, and educational and personal needs through the Intentional Navigation System (PREP) and the ETC (dedicated) Program Navigator to ensure students have that which they need, when they need it, with possible intervention. With this approach, students have a partner to ensure their walk through this educational experience is one of support and follow up. The Navigator and Instructor are in frequent dialogue regarding the student's success, as much as they are in dialogue with each respective student. From the time a potential student determines intent to apply to the school/program, through assessment, placement, and into classroom, students' attendance, assignments, posts, quizzes, lab-time, and exams are all tracked. Students also have access through PREP to the comprehensive listing of services and resources for Jefferson College and for the County/Region. This resource list is updated every semester, and modifications are made both on hard copy and through the PREP System.

The coursework offered through the ETC Program allowed opportunities for latticing/ladder for a person to gain additional skill sets and credentials. In addition, it allows participants the flexibility to jump into industry related work and/or continue on their educational pathway.

### ***2) Create Clear Pathways to STEM Careers - Expand access to and/or develop new stacked and latticed credentials in programs that meet employer needs.***

The Electronics Technology Certificate program provides participants with the opportunity to learn new skills to enhance their employment. This program, like many others in Career and Technical Education relies on the relationships that it has with their Advisory Committees. Those committees are made up of representatives from business and industries in our geographic region. They are extremely important as they relay changes that occur, needs that are shared, and cutting edge, innovative opportunities to allow us as educational partners to stay on point, thus ensuring provisions are made to update curriculum, classroom and lab equipment, systems, technology, and supplies needed for training. Students prepare not only through the

classrooms and labs but also engage in internships, resume building/mock interviews, and job search. Some students are new to their industry while others choose to upgrade skill sets, thus upgrading their respective jobs, duties, and salaries. The opportunity for students in ETC to be awarded Credit for Prior Learning is an option. Students also have the option to “jump off” once a certification is earned, if that is the extent to which they aspire. The Job Tree provides a visual of how one might consider the progress of their respective career.

***3) Improve Employment Attainment - Collaborate with industry, WIBs, state, and community-based organizations to engage, guide and employ participants.***

Recruitment efforts have occurred with partners in the workplace, as well as through Missouri Jobs Centers, specifically in Arnold. At that location, the MSW Electronics Navigator has been co-located during high-peak recruitment periods. It is there that those interested can learn more about the program, go through orientation with the Jobs Center, gain membership to the services provided through MO.JOBS.com, and pre-test via WorkKeys.

The grant provides wrap-around services as needed for student/participants who attend classes, possibly work outside the home. Those services can be both via campus housed or community based, academic and personal in nature. Additionally, opportunities to engage in program based internships with B/I Partners is available. To date, several students have gone through internships and then received offers of employment. All students are provided with potential leads for jobs, access to have resumes reviewed, mock interviews, and follow-up through the College’s Employment Services Department. The ETC Program Navigator also provides follow-up with the students, in efforts to discern that which worked, which didn’t, provide support, and direction for next steps.

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