



OFF-SITE DELIVERY OF AN EXISTING PROGRAM FORM

Sponsoring Institution (s): State Technical College of Missouri
Name of Institution (Campus or off-campus residential center in the case of multi-campus institutions).

Program Title: Automation and Robotics Technology
Degree/Certificate: Associate of Applied Science Degree; Machining Specialist Certificate 0; Electrical Specialist Certificate 0
Institution Granting Degree: State Technical College of Missouri
Delivery Site(s): Lewis and Clark Career Center, St. Charles, MO
Mode of Program Delivery: Traditional

Geographic Location of Student Access: State of Missouri

CIP Classification: 15.0613 (Please provide CIP code)
Implementation Date: Fall 2015
Semester and Year
Cooperative Partners: N/A

AUTHORIZATION

Vicki Schwinke, Chief Academic Officer
Name/Title of Institutional Officer

Handwritten signature and date: Vicki Schwinke Oct. 1, 2014

Vicki Schwinke

573-897-5195

Person to Contact for More Information

Telephone

**Additional Information for State Technical College of Missouri's Location Change  
September 30, 2014**

Bodine Aluminum in Troy, MO is owned by TOYOTA Manufacturing and is the next Toyota enterprise to engage in the program and lead the consortium in the St. Louis area. After a competitive review, TOYOTA and Bodine have selected the State Technical College of Missouri (STC) as the consortium educational partner. (See Attachment #2 the TOYOTA/Bodine press release.)

This program currently exists in Kentucky, West Virginia, Indiana, Mississippi, Texas, Tennessee, and Alabama. The program is centered around a consortium of companies that agrees to select and sponsor students in the program. Students attend classes at the college two full days a week and engage in on the job paid work experiences three days a week. Students are paid a wage which allows them to complete the program virtually debt free. The intent is for the company to hire the student upon graduation – continuing education is also an option. The program has the attention and support of national manufacturing organizations as well as the U.S. Department of Education and will continue to expand both nationally and internationally.

Because of the unique class schedule, it is a requirement that an educational institution is in the host area of the program. STC has selected and TOYOTA and Bodine have agreed that the Lewis and Clark Career Center in St. Charles will be the hosting site. Lewis and Clark Career Center is providing generous space on the campus apart from the central buildings which is available for use and remodeling. Bodine has alerted a core group of companies that the program will be in St. Charles. These companies have indicated interest in becoming part of the consortium.

**TOYOTA BODINE CHOOSES STATE TECHNICAL COLLEGE OF MISSOURI  
FOR NEW ADVANCED MANUFACTURING TECHNICIAN DEGREE PROGRAM**

TROY, Mo. (Oct. 1, 2014) -- Missouri students seeking opportunities to land a job requiring highly advanced skills will be able to get training and a degree through a new program that will be offered through the State Technical College of Missouri (STC) in partnership with Toyota Bodine.

The Advanced Manufacturing Technician (AMT) program has been launched by Toyota in several other states where the company has manufacturing facilities. Toyota works with a local technical college to prepare students in multiple skills that are in demand by manufacturers throughout the country.

Today, Toyota Bodine announced that STC would be its partner in Missouri to teach students in multiple skill areas such as robotics, fluid power, maintenance reliability and lean manufacturing. STC will operate the program on the campus of Lewis and Clark Career Center in St. Charles.

"We are pleased to have been chosen by Toyota Bodine to offer the Advanced Manufacturing Technician program in the St. Louis region. This three way partnership among Toyota Bodine, Lewis & Clark Career Center and State Technical College of Missouri will offer a unique opportunity to students and manufacturers," states STC president Donald Claycomb.

Students participating in the Advanced Manufacturing Technician program will attend classes at the school two days a week and will work three days a week at a local manufacturer. After students complete the five semester program they will earn an Associate of Applied Science Degree. The coursework is such that students wanting to further their education will have the background to pursue a higher degree such as Engineering.

While Toyota Bodine is the catalyst for the program, it hopes to enlist support and interest from several other area companies to offer on-the-job training and eventual hiring of graduates.

"There are currently 600,000 unfilled jobs in the country due to the shortage of qualified, multiple-skilled workers," said Terry Henderson, General Manager of Toyota Bodine. "Students completing the AMT program can get a good paying job literally anywhere in the country, but we hope to capture and keep that talent here in Missouri."

The Missouri AMT program will launch next August for the beginning of the 2015 school year. Partner companies will be announced later, as will information on how students can apply.

For release October 1, 2014.

Contact Terry Henderson 636-448-8859 -- any release

Contact Steve Doede 573-645-2633 -- Unterrified Democrat, Linn; News Tribune, Jefferson City.



**STUDENT ENROLLMENT PROJECTIONS**

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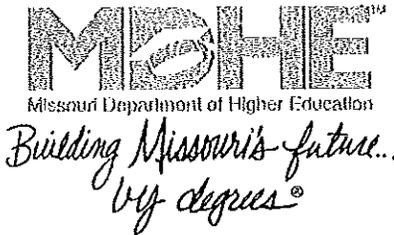
Year	1	2	3	4	5
Full Time	15	29	33	36	37
Part Time	0	0	0	0	0
Total	15	29	33	36	37

Please provide a rationale regarding how student enrollment projections were calculated:

Student enrollment projections are based on enrollment numbers at institutions currently operating a Toyota Advanced Manufacturing Technician program. Projected retention is based on the college's experience in similar programs which involve employer sponsorship.

Provide a **rationale** for proposing this program, including **evidence of market demand and societal need supported by research**:

United States manufacturers compete in a global market. For Missouri to stay competitive there must be a well-educated technical workforce. Much of the current workforce is at or near retirement age. Additionally, there is a gap between the numbers of qualified technicians needed and the numbers available. MERIC information for the St. Louis region indicates that from 2012 to 2022 Engineering Technicians are projected to increase 10.2%, Industrial Engineering Technicians are projected to increase by 4.49%, and Electrical and Electronics Repairers, Commercial and Industrial Equipment are projected to increase by 20.4%. The number of employees needed by these three occupations when considering growth and replacement equals a total of 410 employees from 2012 to 2022. According to Burning Glass over the last 12 months, Missouri had over 12,000 job listings related to advanced manufacturing specifically listing programmable logic controllers and robotics. In St. Louis, there were 4,561 job listing with the same criteria as listed above. These posting encompass skills related to advanced manufacturing such as programmable logic controllers, repair and maintenance, schematic diagram, robotics, process control, hydraulics, and manufacturing processes with job titles such as Industrial Machinery Mechanics, Electricians, Installation, Maintenance, First-line Supervisors of mechanics, installers, and operating and production workers.



## PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

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Institution Name      State Technical Collge of Missouri  
Program Name        Automation and Robotics Technology  
Date                    September 30, 2014

(Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below. Quantification of performance goals should be included wherever possible.)

### 1. Student Preparation

- Any special admissions procedures or student qualifications required for this program which exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.  
It is the goal of this program for admitted students to meet Missouri's college readiness course placement scores. In addition, each student must be sponsored by a company that will provide the three day a week work experience.
- Characteristics of a specific population to be served, if applicable.  
Charateristics of the population served will focus on recent high school graduates with an emphasis on students involved in Project Lead the Way.

### 2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.  
Faculty must hold a minimum of a baccalaureate degree in manufacturing, technology or a related field, a minimum of three years related work experience, and be certifiable by the Missouri Department of Elementary and Secondary Education to teach the skills and knowledge of the occupation taught by the program. In addition to the previous requirements, the Department Chair position include responsibility for the overall administration of the program within the policies and guidelines provided by the Dean of Academic and Student Affairs. The Department Chair supervises instructors, teaching aides, and administrative support staff assigned to the program. The position requires the ability to interact with program advisors, representatives of business and industry partnerships, and faculty and staff at Lewis and Clark Career Center.
- Estimated percentage of credit hours that will be assigned to full time faculty. Please use the term "full time faculty" (and not FTE) in your descriptions here.

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It is estimated that 90% of the required courses will be taught by full-time faculty.

- Expectations for professional activities, special student contact, teaching/learning innovation.  
As expected of all faculty members at State Technical College of Missouri, faculty teaching in the proposed program will be expected to participate in professional development activities to keep them current in their respective fields of expertise. In addition, faculty in this program will be working closely with students and companies to ensure that the innovative work experience model is successful.

### **3. Enrollment Projections**

- Student FTE majoring in program by the end of five years.  
37 full-time students.
- Percent of full time and part time enrollment by the end of five years.  
100% full-time students.

### **4. Student and Program Outcomes**

- Number of graduates per annum at three and five years after implementation.  
Year three = 12 graduates and year five = 17 graduates
- Special skills specific to the program.  
Students will have the theoretical knowledge, laboratory hands-on experience, and a broad range of work experience in a manufacturing environment. Specifically the program skills focus on electrical, fluid power, mechanical, and fabrication skills.
- Proportion of students who will achieve licensing, certification, or registration.  
At this time, the Toyota Program does not offer certifications.
- Performance on national and/or local assessments, e.g., percent of students scoring above the 50th percentile on normed tests; percent of students achieving minimal cut-scores on criterion-referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.  
At least 50% of Automation and Robotics Technology graduates will score at or above the 50th percentile on two of the four exams (Writing Skills, Mathematics, Critical Thinking, and Science Reasoning) on the Collegiate Assessment of Academic Proficiency (CAAP) test.
- Placement rates in related fields, in other fields, unemployed.

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The placement rate in related fields is expected to be approximately 90%. The rates of placement in other fields and unemployment are expected to be approximately 10%.

- Transfer rates, continuous study.  
Transfer rates right out of the program are expected to be minimal. These student are expected to obtain employment with their partnering employer.

#### 5. Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. **If there are no plans to seek specialized accreditation, please provide a rationale.**

The college is seeking continued accreditation by the Association of Technology, Management, and Applied Engineering (ATMAE).

#### 6. Alumni and Employer Survey

- Expected satisfaction rates for alumni, *including timing and method of surveys*. Alumni will be surveyed by USPS mail or electronically at five years post-graduation. The expected satisfaction rate is approximately 80%.
- Expected satisfaction rates for employers, including timing and method of surveys. Employers will be surveyed by USPS mail or electronically three years after hiring an Automation and Robotics Technology program graduate. The expected satisfaction rate is approximately 80%.

#### 7. Institutional Characteristics

- Characteristics demonstrating why your institution is particularly well-equipped to support the program.

TOYOTA / Bodine Aluminum, Inc. chose State Technical College of Missouri (STC) through a competitive process to be its partner in Missouri to offer the Toyota Advanced Manufacturing Technician (AMT) program. This program has been launched by Toyota in several other states where the company has manufacturing facilities. STC is well-equipped to support this collaborative program based on its reputation for excellence in higher education. The college has been serving students with quality educational opportunities for over 50 years. STC has a proven track record of establishing and working with employer advisory committees to develop and offer high-quality technology programs. STC prepares students for profitable employment and a life of learning. STC is accustomed to offering specialized programs for industry. Those programs include the proprietary CAT Dealer Service Technician Option, the Heartland International Dealers Association Option, and the Electrical Distribution Systems program. The ability of STC graduates to enter and hold related employment is one of the most important indicators of the college's success. Since 1995, 95% of STC graduates have found gainful employment or continued their education within six months of graduation. The college confers 19% of the Associate degrees in

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Missouri in the areas of technical education and is A+ eligible which allows qualified graduates of A+ designated high schools to receive tuition reimbursement to attend STC. Another important resource for STC students is the "lifelong" career services assistance program that was developed to assist graduates in obtaining employment in related occupations. The Career Services staff and college faculty have developed and maintained relationships with many of Missouri's businesses, industries, and governmental agencies. Employer contacts are also available across the country. This program is a company designed program and STC was chosen through a competitive process.

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