



**NEW PROGRAM PROPOSAL FORM**

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**Sponsoring Institution(s):** Missouri State University-West Plains

**Program Title:** Manufacturing Technology

**Degree/Certificate:** Certificate (CI)

**Options:** n/a

**Delivery Site(s):** Missouri State University-West Plains

**CIP Classification:** 15.0699

\*CIP code can be cross-referenced with programs offered in your region on MDHE's program inventory [highered.mo.gov/Program\\_Inventory/search.jsp](http://highered.mo.gov/Program_Inventory/search.jsp)

**Implementation Date:** September 2015

**Cooperative Partners:** West Plains R-7 School District South Central Career Center,  
West Plains MO

\*If this is a collaborative program, form CL must be included with this proposal

**AUTHORIZATION:**

Dennis Lancaster/Dean of Academic Affairs

| Name/Title of Institutional Officer    | Signature    | Date |
|--|--------------|------|
| Cathy Proffitt Boys                    | 417-255-7278 |      |
| Person to Contact for More Information | Telephone    |      |



**STUDENT ENROLLMENT PROJECTIONS**

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|           |    |    |    |    |    |
|-----------|----|----|----|----|----|
| Year      | 1  | 2  | 3  | 4  | 5  |
| Full Time | 5  | 6  | 7  | 8  | 9  |
| Part Time | 5  | 6  | 7  | 8  | 9  |
| Total     | 10 | 12 | 14 | 16 | 18 |

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

*The enrollment projections are conservative. New programs typically take some time to become known to potential students so the anticipated enrollment in year one was set at 10 students. Enrollment in each subsequent year increases by 15%. Missouri State University-West Plains, the South Central Career Center and the City of West Plains are committed to improving manufacturing opportunities in this region, with an advanced manufacturing initiative in the development stages. This, and other factors should result in higher enrollment.*

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

*Manufacturing is a significant component of the economy in Missouri. Missouri is home to 6,642 manufacturing companies, employing 252,724 workers. Manufacturing makes up 11.4 percent of employment in Missouri. Employment in Missouri in the Advanced Manufacturing industry showed an increase of 11,113 jobs in the five year period from 2009 to 2013 ([http://www.missourieconomy.org/pdfs/2013\\_manufacturing\\_brief.pdf](http://www.missourieconomy.org/pdfs/2013_manufacturing_brief.pdf)). In West Plains, six of the eight largest employers are manufacturing companies. (<http://www.westplains.net/uploads/EconDevBrochure.pdf>.) Input from area manufacturers indicate their interest and support of expanded academic opportunities in manufacturing to improve the skill set of potential local workers. The City of West Plains Economic Development Office has also expressed support for additional academic opportunities in manufacturing to help attract new manufacturing firms to the West Plains area. A partnership between Missouri State University-West Plains, the South Central Career Center and the City of West Plains to form an advanced manufacturing center is in the planning stages at this time. The proposed Associate of Applied Science in Technology – Manufacturing Option is a first step in that process.*



## COLLABORATIVE PROGRAMS

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**Sponsoring Institutions:** Missouri State University-West Plains

**Degree program:** Certificate in Manufacturing Technology

**Length of agreement:** Three years  
(open-ended or limited)

1. Which institution(s) will have degree-granting authority?  
*Missouri State University – West Plains*
  
2. Which institution(s) will have the authority for faculty hiring, course assignment, evaluation, and reappointment decisions?  
*Missouri State University – West Plains will be responsible for faculty hiring, course assignment, evaluation and reappointment decisions for all but six courses required for this program. The South Central Career Center will be responsible for faculty hiring, course assignment, evaluation and reappointment decisions for six courses. Instructor credentials will be consistent with Missouri State University-West Plains requirements.*
  
3. What agreements exist to ensure that faculty from all participating institutions will be involved in decisions about the curriculum, admissions standards, exit requirements?  
*Missouri State University-West Plains is ultimately responsible for curriculum, admissions standards and exit requirements, although both parties will cooperate in its development.*
  
4. Which institution(s) will be responsible for academic and student-support services, e.g., registration, advising, library, academic assistance, financial aid, etc.?  
*Missouri State University-West Plains is responsible for all admission and financial aid eligibility decisions, registration, transcripts, advising, library, and academic assistance.*
  
5. What agreements exist to ensure that the academic calendars of the participating institutions have been aligned as needed?  
*Missouri State University-West Plains is ultimately responsible for the academic calendar although both parties will cooperate to align academic calendars.*
  
6. In addition to the information provided by each participating institution regarding Financial Projections (Form FP), please address the following items:
  1. How will tuition rates be determined if they differ among the institutions?  
*Missouri State University-West Plains will administer all tuition and fee payments consistent with the tuition and fees established by the Missouri State University Board of Governors.*
  
  2. Has a formal agreement been developed regarding cost-sharing policies? If yes, please include it as part of the proposal. If no, please summarize the current understanding between all parties and the plans for developing a formal agreement.

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*There is no cost sharing.*

3. What arrangements, if any, have been made for exchange of money between participating institutions?

*Missouri State University-West Plains has agreed to pay the South Central Career Center a flat fee per student per credit hour for the delivery of six courses. The cost per student per credit hour shall remain at that amount unless otherwise agreed by both parties.*

7. What commitments have been made by all participants to evaluate the program systematically?

*The Dean of Academic Affairs at Missouri State University-West Plains and the Director and Coordinator of Adult Education at South Central Career Center will review the program at the end of each fall term to determine effectiveness and if changes are needed.*

8. If one institution wishes to discontinue the program, what agreements exist for terminating the offering?

*Either party may terminate the agreement with or without cause, by providing the other party with written notice of termination at least six (6) months before the effective date of termination. If the agreement is discontinued, the institutions agree to provide all currently enrolled students up to three years to complete the Certificate in Manufacturing Technology.*



A. Total credits required for graduation: 27

B. Residency requirements, if any: *Completion of last 15 credits in residence on the West Plains Campus or its extended campuses*

C. General education: Total credits: 0

Courses (specific courses OR distribution area and credits):

| Course Number | Credits | Course Title |
|---------------|---------|--------------|
|               |         |              |

D. Major requirements: Total credits: 27



| Course Number | Credits | Course Title                            |
|---------------|---------|---|
| TEC 100       | 3       | Survey of Electronics                   |
| TEC 111       | 3       | Manufacturing Materials and Process     |
| TEC 123       | 3       | Employment in Manufacturing Occupations |
| TEC 145       | 3       | Mechanical Systems and Fluid Power      |
| TEC 165       | 3       | Manufacturing Technology                |
| TEC 175       | 3       | Welding Technology                      |
| TEC 200       | 3       | Applied Electricity and Electronics     |
| TEC 275       | 3       | Automated Manufacturing                 |
| TEC 299       | 3       | Technology Internship                   |
|               | 27      |   |
|               |         |   |

**E. Free elective credits:**

*There are no free electives.*

(Sum of C, D, and E should equal A.)

**F. Requirements for thesis, internship or other capstone experience:**

*Students are required to complete the TEC 299 Technology Internship (120 contact hours.)*

**G. Any unique features such as interdepartmental cooperation:**

*The proposed Associate of Applied Science in Technology-Manufacturing Option contains the same courses as the Certificate in Manufacturing Technology.*



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Notes:

- Faculty salary and benefits are approximately 60% of tuition (50% salary + 10% benefits).
- Staff time devoted to this program is estimated at 5% of one staff member.
- Basic student fee per credit hour is assumed at \$129, plus additional fees, with an estimated 3% increase per year.
- Full-time students are assumed to take 30 credit hours per academic year. Part-time students are assumed to take 15 credit hours per academic year.

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## PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

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Institution Name Missouri State University-West Plains  
Program Name Associate of Applied Science in Technology – Manufacturing Option  
Date March 31, 2015

(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.

*Missouri State University-West Plains is an open admission campus. The proposed Certificate in Manufacturing Technology has no special preparation required beyond the regular university admission requirements.*

- Characteristics of a specific population to be served, if applicable.  
*Missouri State University-West Plains is located in the most rural and isolated region of the state and are the only public higher educational opportunities in the seven county service area. Of the total residents in the service area, 25 percent live at or below the poverty line. Less than nine percent of the service area population have achieved college degrees. Approximately three-fourths of the MSU-West Plains students are not prepared for college-level work as measured by placement assessment, forcing them to complete up to three remedial courses.*

### 2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.

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*Full-time and part-time faculty are required to have completed a minimum of a masters degree or have substantial, specialized practical experience in order to teach the courses required for this degree program.*

- 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.  
*Approximately 33% of the courses for this program may be taught by full-time faculty and 67% may be taught by per course faculty.*
- Expectations for professional activities, special student contact, teaching/learning innovation.  
*Full-time faculty are strongly encouraged to pursue continuing education opportunities in their respective fields and to participate in professional organizations; professional development funds are provided by the university. All full-time faculty serve as student advisors.*

### **3. Enrollment Projections**

- Student FTE majoring in program by the end of five years.  
*Estimated FTEs = 13 students.*
- Percent of full time and part time enrollment by the end of five years.  
*Estimated full-time enrollment = 50%; Estimated part-time enrollment = 50%*





#### 4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.  
*Estimated graduates at three years = 6; Estimated graduates at five years = 13*
- Special skills specific to the program.  
*Students will acquire an understanding of the following: electricity, electronics, manufacturing materials and processes, supply chain management, mechanical systems, fluid power, manufacturing technology, welding, automated manufacturing. A 120 contact hour (3 credit hours) internship is also a require part of this program.*
- Proportion of students who will achieve licensing, certification, or registration.  
*NA*
- 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.  
*Expected results on the ACT's Collegiate Assessment of Academic Proficiency (CAAP) to remain above the national average.*
- Placement rates in related fields, in other fields, unemployed.  
*Estimated placement rate in related fields = 80%; Estimated placement rate in other fields = 20%*
- Transfer rates, continuous study.  
*Estimated transfer and/or continuous study rate = 35%*

#### 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 Higher Learning Commission of the North Central Association – Fall 2014*

#### 6. Alumni and Employer Survey

- Expected satisfaction rates for alumni, *including timing and method of surveys.*  
*Graduate surveys will be conducted, via telephone, within six months of graduation.*
- Expected satisfaction rates for employers, including timing and method of surveys.  
*Employers of program graduates will be surveyed, via telephone, within six months of graduation. A general survey of local employers will be conducted every two years, via written*

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*survey mailed to each employer, with at least 90% of employers responding will indicate satisfaction with the preparation of graduates.*

## **7. Institutional Characteristics**

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

*Since 1963, Missouri State University-West Plains has successfully met the needs of its constituents in providing effective learning opportunities to students in liberal arts and transfer education. Since the mid-1990's, those opportunities were extended to programs in career and technical education. Since 1997, Missouri State University-West Plains and the South Central Career Center have cooperated in providing technical educational course offerings to students toward completion of an associates degree. With this proposed degree program Missouri State University-West Plains is striving to fulfill its mission to provide quality educational services to south central Missouri. Missouri State University-West Plains is an open admissions campus with 2,200 undergraduate students and is part of the Missouri State University multi-campus university system. As part of this multi-campus system, Missouri State University-West Plains students have bachelors-level transfer program opportunities on the West Plains campus, as well as the Springfield campus.*