



**NEW PROGRAM PROPOSAL FORM**

**Sponsoring Institution(s):** Three Rivers Community College

**Program Title:** Manufacturing Welding

**Degree/Certificate:** One Year Certificate

**Options:** N/A

**Delivery Site(s):** All locations

**CIP Classification:** 48.0508

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

**Implementation Date:** Fall 2015

**Cooperative Partners:**

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

**AUTHORIZATION:**

Dr. Wesley A. Payne, President/VPL

3/3/15

Name/Title of Institutional Officer

Signature

Date

Dr. Brenda Russell, Dean of Career education

573-840-9682

Person to Contact for More Information

Telephone



## Summary of Need Rationale

### A. Student and Market Demand

Industry partners in the area project job openings in the next five years in welding will increase due to business projections. These partners have agreed to work with Three Rivers College, allowing us to train the welding workforce needed for the future. These figures were arrived from questioning industry partners of their projected needs. There is also commitment from fifteen full time students enrolled in the pilot courses who plan to complete the welding program giving us a year 1 projection. Interest poll were also conducted onsite at two Missouri Career Centers. Based upon statistical process with that information we feel we can safely project a small growth over the five year plan.

### B. Societal Needs

This program represents an affordable option for employment preparation for residents of the college service area. The tuition for a degree/certificate at Three Rivers College is inexpensive and provides an affordable option to leaving the area to attend another institution. In addition the nearest adult education facility that offers this type of training is hundreds of miles away in another region of the state. There also are a great number of experienced welders in our area of the state that have to travel to another state for industry certification. In the future certification will be obtainable here in our area through this program. This program will provide citizens in our region with technical skills to compete in today's global marketplace, to advance career opportunities, and provide a better standard of living for their families.

### C. Methodology for Identification of Market and Societal Need

Market demand and societal information was obtained from a variety of sources. Specific sources include but are not limited to the following:

- Advisory Committee recommendations
- Literature review of trade journals
- Labor Statistics
- Occupation Projections
- Needs assessment
- Industry interest poll
- Student interest poll

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**STUDENT ENROLLMENT PROJECTIONS**

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Year	1	2	3	4	5
Full Time	8	10	12	14	17
Part Time	7	6	5	5	5
Total	15	16	17	19	22

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

Industry partners in the area project job openings in the next five years in welding will increase due to business projections. These partners have agreed to work with TRCC, allowing us to train the welding workforce needed for the future. These figures were arrived from questioning these industry partners of their projected needs. There is also commitment from fifteen full time students enrolled in the pilot courses who plan to complete the welding program giving us a year 1 projection. Interest poll were also conducted onsite at two Missouri Career Centers. Based upon statistical process with that information we feel we can safely project a small growth over the five year plan.

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

The need for trained welders is expected to increase in the entire state of Missouri. Based on the Missouri's Fastest Growing Occupations 2013-2015, welding, soldering and brazing machine setters, operators and tenders is listed at number seven from the top. This was in a category that included jobs requiring training longer than 12 months but not longer than an associate's degree. The job category for welder is seventh in the state with a projected growth range of 5.60%. The state averages 306 yearly openings with an industry projected increase in the next five years. The demand was determined through discussion with Three Rivers Student Services personnel, student advisors, Career Education and Workforce Development office, local businesses, and industry leaders in the region, and economic development leaders. All reveal there is a need for training in all areas of the welding trade for both existing and future technicians.



Course Number	Credits	Course Title
WELD 155	4	Introduction to Metal Inert Gas
WELD 156	4	Introduction to Shielded Metal Arc Welding
WELD 157	4	Introduction to Tungsten Inert Gas
WELD 159	4	Introduction to Flux Cored Arc Welding
WELD 165	3	Welding Blueprint Reading
WELD255	4	Advanced Metal Inert Gas
WELD 265	3	Welding Fabrication
MAFT 229	3	Intro to Safety and Health Programs
CIVL 106 OR 107	2	Technical Math I or Technical Math II

E. Free elective credits:

0

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

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

no

G. Any unique features such as interdepartmental cooperation:

no



## PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name      Three Rivers Community College  
Program Name          Manufacturing Welding  
Date      10/27/2014

(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.  
None
- Characteristics of a specific population to be served, if applicable.  
none

### 2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.  
Instructor must be AWS certified and hold a "CWE" Certified Welding Educator from the American Welding Society
- 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.  
12
- Expectations for professional activities, special student contact, teaching/learning innovation.  
None

### 3. Enrollment Projections

- Student FTE majoring in program by the end of five years.  
22
- Percent of full time and part time enrollment by the end of five years.  
75% FT 25% PT

### 4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.  
20

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- Special skills specific to the program.  
The ability to maintain quality welds through good hand eye coordination and technical math competency.
- Proportion of students who will achieve licensing, certification, or registration.  
50%
- 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.  
The only assessments for certification we expect to use is various certifications from the American Welding Society. We hope 50% of our graduates by the third year are certified welders whose names will be added to the national registry
- Placement rates in related fields, in other fields, unemployed.  
Since we have industry partners who will be sending their students directly to us for training our placement rates should be high. We plan to place 70 to 80% of our students relatively quick and possibly as early as the first year.
- Transfer rates, continuous study.  
25%

##### 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.**  
TRCC plans to seek accreditation through the American Welding society and in the very near future we hope to be an approved AWS testing facility

##### 6. Alumni and Employer Survey

- Expected satisfaction rates for alumni, *including timing and method of surveys.*  
We have included industry leaders, and have developed an advisory council from area industry. These companies are excited about this program having already conducted a job fair with students of the course. Our expectation is satisfied industry partners or changes will be made to make that happen.



Expected satisfaction rates for employers, including timing and method of surveys.

The plan is to have a survey prepared for industry partners with the results of those to follow shortly after the employment of students. We will conduct these just as we did the interest poll only during advisory meetings.

#### **7. Institutional Characteristics**

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

TRCC received a DOL grant to support the development of this program in October 2013 meaning no state money will be needed for set up or operation for the first three years. The city of Caruthersville also stepped up, providing a building which has been remodeled for the total purpose of conducting welding classes. TRCC has employed certified adjunct faculty onsite with this program, and have multiple supporting industry partners.



**Program Title: Manufacturing Welding Certificate**

**Degree Type: One-Year Certificate**

**Contact: Michael Barrett [mbarrett@trcc.edu](mailto:mbarrett@trcc.edu)**

**Purpose: This program builds knowledge and skills in operating welding equipment and performing basic welding operations. Students will receive hands-on instruction in cutting processes; gas metal arc, gas tungsten arc, and shielded metal arc welding; shop safety; fabrication; oxy/acetylene fusion welding; quality assurance, and using blueprints. This certificate could be built upon in seeking industry certification, and the skills developed will prepare the student for such certification. The student can choose to take any course in steps that can be stacked one at a time or in multiples. The certificate could aid the student in securing employment in the manufacturing workplace.**

Fall Semester			Hours	
CIVL	106	Technical Math I -or-	3	
CIVL	107	Technical Math II	3	
MAFT	229	Introduction to Safety and Health	3	
WELD	155	Introduction to MIG (Metal Inert Gas)	4	
WELD	156	Introduction to SMAW (Shielded Metal Arc Welding)	4	
WELD	157	Introduction to TIG (Tungsten Inert Gas)	4	
WELD	159	Introduction to FCAW (Flux Cored Arc Welding)	4	
WELD	165	Welding Blueprint Reading	3	
WELD	255	Advanced MIG (Metal Inert Gas )	4	
WELD	265	Welding Fabrication	3	
<b>TOTAL HOURS</b>			<b>32</b>	

**32 hours required**