



**NEW PROGRAM PROPOSAL FORM**

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

**Program Title:** Precision Agriculture

**Degree/Certificate:** One Year Certificate 1Year

**Options:** N/A

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

**CIP Classification:** 010301

\*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:** Click here to enter text.

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

**AUTHORIZATION:**

Dr. Wesley Payne, President

Name/Title of Institutional Officer

Wesley A. Payne  
Signature

3/24/15  
Date

Dr. Brenda Russell, Dean of Career Education

Person to Contact for More Information

573-840-9682

Telephone



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



**STUDENT ENROLLMENT PROJECTIONS**

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Year	1	2	3	4	5
Full Time	15	16	17	19	22
Part Time					
Total	15	16	17	19	22

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

We have industry partners in the area who project job openings in the next five years in precision agriculture will increase due to business projections. These partners have agreed to work with us and allow us to train their workforce needed for the future and we arrived at these projections partially from questioning them of their projected needs. We are already training in a number of courses that align with this curriculum which has over fifteen full time students enrolled now who plan to complete the new program which gave us a year 1 projection. We have also done an interest pole onsite at two Missouri Career Centers and based upon statistical process and 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 agriculture technician is expected to increase in the entire state of Missouri. Based on the Missouri's Fastest Growing Occupations 2013-2015. In the southeast region an increase of 3.5% is projected in 2015 and in a category that included jobs requiring training longer than 12 months but not longer than an associate's degree. Missouri ranks second in the nation in the number of farms, with 107,825. Missouri employs 298,320 workers in farms and agribusiness industries. Missouri's top agribusiness industries are pesticides and chemical manufacturing plants, farm supplies, meat and poultry processing plants. Agriculture in the

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southeast region one of the top high growth industries in the state in 2014. The demand was determined through discussion with Three Rivers Student Services, student advisors, Career Education and Workforce Development office, local business and industry leaders in the region and economic development leaders who all reveal there is a need for training in all areas of agriculture for both existing and future technicians.

### **Summary of Need Rationale**

#### **A. Student and Market Demand**

Our industry partners in the area project job openings in the next five years in Precision Agriculture will increase due to business projections. These partners have agreed to work with us and allow us to train their workforce needed for the future and we arrived at these projections partially from questioning them of their projected needs. We have already began training and have commitment from fifteen full time students enrolled with us now who plan to complete the program which gave us a year 1 projection. We have also did an interest pole onsite at two Missouri Career Centers and based upon statistical process and 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. Missouri ranks second in the nation in the number of farms, with 107,825. Missouri employs 298,320 workers in farms and agribusiness industries. Missouri's top agribusiness industries are pesticides and chemical manufacturing plants, farm supplies, meat and poultry processing plants. 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
- Student interest pole

**Duplication and Collaboration**

There are various programs similar to the one proposed, offered at other four year colleges throughout the state. These program offerings, however are not within the Three Rivers service area and do not create duplication of effort. Neither do private career schools in our area offer this type of programming nor do public secondary institutions offer this type of programming for adult education but only for their students. It should also be noted that the particular courses we plan to offer are not duplicated at even those distant facilities in our state who do offer Precision Agriculture courses, but they are specific to our local industry and societal needs. Our plan to offer Precision Agriculture is designed to be offered in all locations of the service area.



Home | Industry | Industry Employment Projections |

### Industry Employment Projections

Industry    
 Area    
 Short Term  Long Term



### Agriculture & Forestry Support Activity

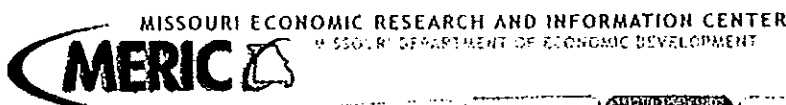
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Industry	Employment		Change	
	Estimated 2013	Projected 2015	Numeric	Percent
<b>Missouri</b>	2,458	2,542	84	3.42
<b>Kansas City Region</b>	186	192	6	3.23

Data produced by Missouri Economic Research and Information Center (MERIC). Funding provided by U.S. Department of Labor's Employment and Training Administration (ETA)

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- Occupation Studies
- Regional Information
- Community Issues

[Home](#) | [Occupation](#) | [OES Wages](#) |

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[Industry](#)

[Occupation](#)

[Regional Information](#)

[Community Issues](#)

## Occupational Employment and Wage Estimates

Area: Missouri  
 Occupation: Agricultural Workers, All Other  
 Year: 2013

Search ..

Area	Year	SOC Code	Occupation	Employment	Hourly Wage (mean)	Hourly Wage (entry)	Hourly Wage (experience)	Annual Wage (mean)	Annual Wage (entry)	Annual Wage (experience)	Wage Error
Missouri	2013	45-2099	Agricultural Workers, All Other	NA	\$11.95	\$9.39	\$13.22	\$24,849.00	\$19,537.00	\$27,505.00	8.35%

Source: Division of Occupational Employment Statistics  
 U.S. Bureau of Labor Statistics

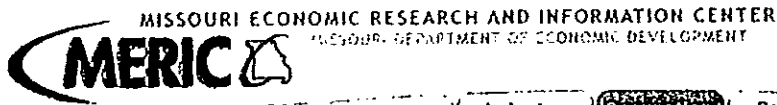
Data for Workforce Regions produced by MERIC  
 NA --- Data Not Available

The Occupational Employment Statistics (OES) program conducts a semiannual survey of businesses and produces nearly 800 employment and wage estimates for Missouri. Under the direction of the Bureau of Labor Statistics (BLS) these employment and wage estimates are calculated for statewide Missouri, as well as Missouri's 9 Metropolitan Statistical Areas (MSA) and 4 Balance of State (BOS) regions. The Missouri Economic Research and Information Center (MERIC) in cooperation with BLS, also calculates employment and wage estimates for Missouri's 10 Workforce Investment Areas (WIA). These WIA estimates are produced independently of BLS, and include both "Entry" and "Experienced" wage estimates. Due to confidentiality and quality criteria, MERIC cannot produce estimates for every occupation in every geographic area. In order to better meet the needs of our local users, the Missouri Occupational Employment Statistics (OES) staff has produced wage estimates for other geographic areas within Missouri. These estimates incorporate data from OES and are generated utilizing BLS approved methodology. Data for the OES surveys was collected on different occupational structures and therefore are not directly compatible. They have not been validated by BLS and are not official BLS data series. However, the Missouri OES staff feels that they provide additional information that is useful to the users of Missouri data.

Link [here](#) for more information on OES survey methodology.

For more information on the terms used in these estimates, click [here](#).





- [Home](#)
- [Economic Indicators](#)
- [Industry Studies](#)
- [Occupation Studies](#)
- [Regional Information](#)
- [Community Issues](#)

- [Home](#) | [Occupation](#) | [OES Wages](#) |
- [Economic Indicators](#)
- [Industry](#)
- [Occupation](#)
- [Regional Information](#)
- [Community Issues](#)

## Occupational Employment and Wage Estimates

Area: Southeast Region  
 Occupation: Agricultural Equipment Operators  
 Year: 2013

[Search](#)

Area	Year	SOC Code	Occupation	Employment	Hourly Wage (mean)	Hourly Wage (entry)	Hourly Wage (experience)	Annual Wage (mean)	Annual Wage (entry)	Annual Wage (experience)	Wage Error
Southeast Region	2013	45-209	Agricultural Equipment Operators	440	\$12.13	\$8.01	\$14.20	\$25,235.00	\$16,654.00	\$29,526.00	11.14%

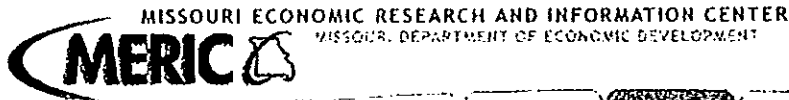
Source: Division of Occupational Employment Statistics  
 U.S. Bureau of Labor Statistics

Data for Workforce Regions produced by MERIC  
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- Home
- Economic Indicators
- Industry Studies
- Occupation Studies
- Regional Information
- Community Issues

- [Home](#) | [Occupation](#) | [OES Wages](#) |
- [Economic Indicators](#)
- [Industry](#)
- [Occupation](#)
- [Regional Information](#)
- [Community Issues](#)

## Occupational Employment and Wage Estimates

Area: Missouri  
 Occupation: Agricultural Inspectors  
 Year: 2013

[Search](#)

Area	Year	SOC Code	Occupation	Employment	Hourly Wage (mean)	Hourly Wage (entry)	Hourly Wage (experience)	Annual Wage (mean)	Annual Wage (entry)	Annual Wage (experience)	Wage Error
Missouri	2013	45-2011	Agricultural Inspectors	280	\$19.14	\$13.16	\$22.13	\$39,814.00	\$27,373.00	\$46,034.00	1.85%

Source: Division of Occupational Employment Statistics  
 U.S. Bureau of Labor Statistics

Data for Workforce Regions produced by MERIC  
 NA --- Data Not Available

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