Missouri Department of Higher Education

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NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s): Three Rivers Community College

Program Title: Heating, Ventilation, Air Conditioning/Refrigeration Technology

Degree/Certificate: One Year Certificate

Options: Click here to enter text.

Delivery Site(s): Offsite-Willow Springs

CIP Classification: 47.0201

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

Implementation Date: Spring 2014

Cooperative Partners: Industrial Technology Advisory Committee

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

AUTHORIZATION:

Dr. Wesley Payne, Vice President of Learning

Name/Title of Institutional Officer Signature Date

Dr. Mary Lou Brown, Dean of Academic Instructon (573) 840-9600

Person to Contact for More Information Telephone

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STUDENT ENROLLMENT PROJECTIONS

Year	1	2	3	4	5
Full Time	**12**	**11**	**12**	**14**	**18**
Part Time	**2**	**5**	**6**	**6**	**6**
Total	**14**	**16**	**18**	**20**	**24**

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

Enrollment will be smaller to start, but need and projections of employment provided a projected baseline of 12 full-time students in the first year. Growth will continue through the following four years overall as part-time students enroll and more full-time students become aware of the opportunities.

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

The need for trained heating, ventilation, air conditioning and refrigeration (HVAC/R) technicians is expected to increase in the entire state of Missouri. According to the Missouri Department of Economic Development's MERIC data, these positions are among the top eight growing occupations for the "next" category, a category that included jobs requiring training longer than 12 months but not longer than an associate's degree. Discussion with Three Rivers' Student Services area, student advisors, the Career Education and Workforce Development office, local business and industry leaders, and economic development leaders in the service region reveals there is a need for training for both existing and future technicians. 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 relatively inexpensive and provides an affordable option to leaving the area to attend another institution. In addition, there are no longer secondary/adult educational opportunities at area career and technical/vocational schools in the area that could help fill some of the need. This program provides citizens with the technical skills to compete in today's global marketplace, to advance career opportunities, and provide a better standard of living for their families.

Summary of Need/Rationale

A. Student and Market Demand

The need for trained heating, ventilation, air conditioning and refrigeration (HVAC/R) technicians is expected to increase in the entire state of Missouri. According to the Missouri Department of Economic Development's MERIC data, these positions are among the top eight growing occupations for the "next" category, a category that included jobs requiring training longer than 12 months but not longer than an associate's degree. Discussion with Three Rivers' Student Services area, student advisors, the Career Education and Workforce Development office, local business and industry leaders, and economic development leaders in the service region reveals there is a need for training for both existing and future technicians. The enrollment for the first five years of the program is estimated as follows:

Year 1	14
Year 2	16
Year 3	18
Year 4	20
Year 5	24

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 relatively inexpensive and provides an affordable option to leaving the area to attend another institution. In addition, there are no secondary/adult educational opportunities at area career and technical/vocational schools in the area that could help fill some of the need. This program provides citizens with the 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:

- Labor Statistics
- Advisory Committee recommendations
- Needs assessment
- Literature review of trade journals

Duplication and Collaboration

Various programs similar to the one proposed are offered by other community colleges throughout the state; these program offerings, however, are not within the Three Rivers service area and do not create duplication of effort. Neither private career schools nor area career and technical schools in the region offer programming of this nature.

This program in HVAC/R is designed to be offered at all locations throughout the service area.

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PROGRAM STRUCTURE

A. Total credits required for graduation: 33

B. Residency requirements, if any: 15

C. General education: Total credits: 9

Courses (specific courses OR distribution area and credits):

Course Number	Credits	Course Title
HVAC 100	3	Safety for Heat/AC Refrigeration Profession
HVAC110	3	Air Condition and Refrigeration I
HVAC 210	3	Air Condition and Refrigeration II
HVAC 111	3	Basic Electricity Heat/Ref/AC
HVAC 112	3	Refrigeration Motors and Controls
HVAC 113	3	Residential Cooling/Heating
HVAC 213	3	Commercial Cooling/Heating
HVAC 214	3	Commercial Refrigeration
MATH-153	3	Intermediate Algebra
ENGL-111	3	College Writing
IST-100	3	Computer Literacy

D. Major requirements: Total credits: _____

Course Number	Credits	Course Title

E. Free elective credits:
0
(Sum of C, D, and E should equal A.)

F. Requirements for thesis, internship or other capstone experience:
0

G. Any unique features such as interdepartmental cooperation:
None

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PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name Three Rivers College
Program Name Heating, Ventilation, Air Conditioning/Refrigeration Technology.
Date November 25, 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.
  No special preparation will be required.

- Characteristics of a specific population to be served, if applicable.
  Three Rivers College subscribes to an open admissions concept in order to provide full educational opportunities to all persons able to benefit from the education programs of the college. The college may restrict or deny admission to any applicant whose record of behavior indicates that his or her admission would disrupt the orderly process of the college's programs, would interfere with the rights and privileges of other students, creates a threat or potential danger to the college community, is statutorily barred from the college, or if such denial of access is considered to be in the best interest of the college. Three Rivers is an equal opportunity affirmative action institution and does not discriminate against any student on the basis of race, color, sex, religion, age, disability, national origin, or legal political affiliation or membership. The College evaluates special cases for acceptance. Admission requirements for the HVAC/R certificate program will not exceed regular admission requirements.

2. Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.
  Standard career and technical education (CTE) faculty requirements that exist for those teaching in other CTE programs will be required. Three Rivers College will select instructors from the approved list where adjunct faculty is used. All instructors for the Heating, Ventilation, Air Conditioning,/Refrigeration Technology certificate program must meet the same academic and professional requirements

for teaching a given course as would be required to teach the same course on campus.

- 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.
  It is anticipated that at least 24 credit hours will be assigned to adjunct faculty.

- Expectations for professional activities, special student contact, teaching/learning innovation.
  The faculty will be expected to utilize various distance-learning methodologies such as web-based as well as utilization of business and industry partners to provide job site observation and experience where appropriate.

3. Enrollment Projections

- Student FTE majoring in program by the end of five years.
  It is anticipated to have 10 graduates at three years and 24 at five years.

- Percent of full time and part time enrollment by the end of five years.
  It is anticipated that approximately 60 percent of students will enroll full time and 40 percent will enroll part time.

4. Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.
  It is anticipated to have 10 graduates at three years and 24 at five years.

- Special skills specific to the program.
  Students will acquire the knowledge an dskills required for entry level employment of continued employment in residential, commercial, and industrical Heating, Ventillation, Air Conditioning/Refrigeration installation, maintenance, and repair.

- Proportion of students who will achieve licensing, certification, or registration.
  The college has a goal that program graduates will score at or above the 50th percentile on the TSA assigned to the program, with 80% achieving local licensure, industry certification or registration as appropriate a (varies by local governing body in this field of study).

- 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.
It is anticipated that 100% of all graduates will score above the 50th percentile on normed tests, as well ad achieve minimal cut-scores on criterion-referenced tests. Expectations are that 100% of all graduates will successfully complete general education coursework (remedial coursework will be available for those in need of these services), and that 80% of all graduates will succeed in passing the exit assessment. The exit assessment will be HVAC Excellence Exam.

- Placement rates in related fields, in other fields, unemployed.
  It is anticipated that 100% of the graduates from the program will be employed in related fields due to the regional demand for employees with the knowledge and skills of this program.

- Transfer rates, continuous study.
  The program is not designed for transfer.

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.**
  There are not any state-level accreditations applicable to this program.

6. Alumni and Employer Survey

- Expected satisfaction rates for alumni, *including timing and method of surveys.*
  The college conducts a follow-up survey of graduates 180 days after graduation. It is estimated that 80 percent of the students surveyed will indicate they are satisfied with the program and believe they are will prepared for employment in the studied field.

- Expected satisfaction rates for employers, including timing and method of surveys.
  Employers will be contacted, by phone and/or written survey, as graduates complete the program and begin implementing their new skills in the workplace. It is anticipated that 85-90 percent of the businesses employing our graduates will be satisfied with the technical skills possessed and demonstrated by our graduates. Feedback from the program's Advisory Committee will be crucial in determining the satisfactionon employers. Formal Adivisory Committee Meetings will be held twice per academic year.

7. Institutional Characteristics

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

Three Rivers Community College is ideally suited to offering this program. No other institutions offer a program similar to this in the service region. The initial response from the

public, parents, potential students, and local business leaders has been extremely positive. Three Rivers College has successfully partnered with Area Career and Tehcnology Centers or over 20 years to articulate a similar program of study to the associate degree level.

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OFF-SITE DELIVERY OF AN EXISTING PROGRAM FORM

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

Program Title: Heating, Ventilation, Air Conditioning/Refrigeration Technology
Degree/Certificate: One Year Certificate
Institution Granting Degree: Three Rivers College
Delivery Site(s): Willow Springs
Mode of Program Delivery: On-site classroom and lab.

Geographic Location of Student Access: Willow Springs

CIP Classification: 47.0201 (Please provide CIP code)
Implementation Date: Spring, 2014
Semester and Year
Cooperative Partners: Click here to enter text.

AUTHORIZATION

Dr. Wesley Payne, Vice President of Learning

Name/Title of Institutional Officer Signature Date

Dr. Mary Lou Brown, Dean of Academic Instruction

(573) 840-9600

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