



Missouri Department of Higher Education

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**NEW PROGRAM PROPOSAL FORM**

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

**Program Title:** Pre-Health Medicine

**Degree/Certificate:** A.S.

**Options:** Click here to enter text.

**Delivery Site(s):** Poplar Bluff – main campus, Malden, Sikeston, Kennett, Dexter

**CIP Classification:** 51.1199 (Please provide a CIP code)

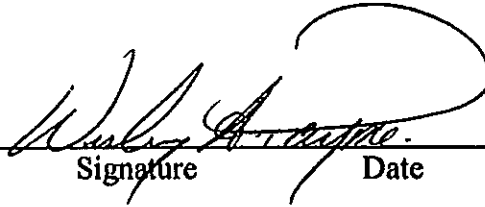
**Implementation Date:** Fall 2015

**Cooperative Partners:** Click here to enter text.

**AUTHORIZATION:**

Dr. Wesley A. Payne, President/VPL

Name/Title of Institutional Officer



Signature

3/3/15

Date

Dr. Wesley Payne

President/Vice President for Learning

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Person to Contact for More Information

Telephone

## SUMMARY OF NEED

### A. Student Demand

A program of study for students interested in health sciences (medicine, veterinary) is not available in our service area. This field of study is a discipline that requires a substantial science background. The total amount of science necessary makes this program more suitable to an associate of science degree rather than an associate of arts degree for more efficient transfer. Students in our service area currently have limited options available for completing 200 level science courses. This program was developed so that students in our service area could obtain this degree without having to leave the area. Students can take the basic requirements through Three Rivers Community College and then transfer to University of Missouri – Columbia. Students are advised to take additional pre-health coursework while pursuing their BS in Biology. Students would then take the Medical College Admission Test (MCAT) and apply to their professional program. Students in our service area would have access to a pre-health medicine option in a more affordable and accessible form.

Based on discussions with students enrolled in science and advanced science classes, some expressed their concern with being able to smoothly transfer from Three Rivers to their professional program. This option would allow them to more easily make this transition. The assessment of Three Rivers Community College faculty indicated there is a need for a degree option for students interested in this field of study. The demand in medicine is expected to grow due to the increased need for care of an aging population. In addition, there is a continued need for veterinarians, especially in care of farm animals and related fields.

The enrollment for the first five years of the program for full- and part-time students is estimated as follows:

Year 1	2015-2016	20
Year 2	2016-2017	25
Year 3	2017-2018	30
Year 4	2018-2019	35
Year 5	2019-2020	40

The size and scope of the program will initially be limited due to availability of funds for advertising and marketing of a new program. For enrollment projections, see FORM SE attached.

## B. Market Demand

Needs analysis was conducted by evaluating the options currently available in our service area for our students as physicians and veterinarians. An accredited degree in this field of study is desirable to better prepare the students to transfer their coursework to University of Missouri – Columbia, complete the BS in Biology degree, sit the MCAT and apply to medical or veterinarian school. There are jobs in Missouri and our service area requiring these fields of study.

Physicians: The Occupational Outlook Handbook published by the Bureau of Labor Statistics (BLS) under the Department of Labor indicates that the job outlook for physicians is expected to increase by 18% between 2010 and 2022 which is much faster than the average for all occupations. According to BSL, this particular field is expected to grow faster than the average due to the continued expansion of healthcare-related industries. Job prospects should be good for physicians who are willing to practice in rural and low-income areas, because these areas tend to have difficulty attracting physicians. Job prospects also should be good for physicians in specialties dealing with health issues that largely affect aging baby boomers. For example, physicians specializing in cardiology and radiology will be needed because the risks for heart disease and cancer increase as people age.

The Missouri Department of Economic Development shows that in 2013 there were 6,389 medical physicians licensed in Missouri, with a mean annual salary of \$197,362. Based on BSL's growth rate of 18% there will be an increased need for about 1150 medical doctors in Missouri between 2010 and 2022, not taking into account retirement and relocation. The greatest demand will be in low-income areas such as TRC's service area of southeast Missouri.

Veterinarians: The Occupational Outlook Handbook published by the Bureau of Labor Statistics (BLS) under the Department of Labor indicates that the job outlook for veterinarians is expected to increase by 12% between 2010 and 2022 which is as fast as average for all occupations. According to BLS, candidates can expect very strong competition for available veterinarian positions. Those with specializations and prior work experience should have the best job opportunities. Job opportunities in farm animal care will be better, because fewer veterinarians compete to work on large animals. Also, there will be some job opportunities available in the federal government in food safety, animal health, and public health. Given the training they receive from veterinary school, veterinarians are highly qualified for nontraditional industry positions in fields such as public health, disease control, corporate sales, and population studies. With potentially fewer opportunities in companion animal care, many graduating veterinarians will likely have better job prospects in these areas.

The Missouri Department of Economic Development shows that in 2013 there were 1,286 veterinarians practicing in Missouri, with a mean annual salary of \$82,474. Based on BSL's growth rate of 12% there will be an increased need for about 154 veterinarians in Missouri between 2010 and 2022, not taking into account retirement and relocation.

### Societal Needs

This degree represents an affordable option for preparation for employment for residents of the service area. The tuition for a degree at Three Rivers Community College is relatively inexpensive and provides considerable monetary savings to students wishing to complete the first couple of years in the area prior to transferring to University of Missouri - Columbia. In addition, the

program provides citizens with the means of pursuing a degree in a field that provides a service to the community and provides a better standard of living for their families.

After evaluating the potential future growth of the medical industry and the expected future need for doctors and veterinarians, it was determined there is a demand for training of future health doctors and veterinarians in our service area.

#### 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:

- Internet research on labor statistics in 2015:
  - ✓ Bureau for Labor Statistics
  - ✓ Missouri Department of Economic Development
- Needs assessment conducted by Three Rivers Community College staff (2014-2015)

### **DUPLICATION AND COLLABORATION**

There are very few programs similar to this program offered by other community colleges throughout the state and none of the existing programs are available within our service area. Therefore there is no duplication of effort with any other community college.

This program in pre-Health Medicine is designed to be offered at the home campus and at our education centers located in Malden, Sikeston, Kennett and Dexter. The program was set up so that students can complete two years at Three Rivers Community College, transfer to University of Missouri – Columbia to finish their undergraduate work, sit the MCAT and apply to either the Doctor of Medicine or Veterinary degree program.



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### STUDENT ENROLLMENT PROJECTIONS

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Year	1	2	3	4	5
Full Time	15	19	23	27	31
Part Time	5	6	7	8	9
Total	20	25	30	35	40

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Form SE - Student Enrollment Projections



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PROGRAM STRUCTURE

A. Total credits required for graduation: A.S. in Pre-Health Science – 64 Credit Hours

B. Residency requirements, if any: 15 Credit hours must be completed at Three Rivers Community College

C. General education: Total credits: 28

Courses (specific courses OR distribution area and credits):

Table with 3 columns of course numbers and credit hours: ENGL 111 (3 cr), ENGL 112 (3 cr), GOVT 121 (3 cr), BIOL 190 (5 cr), CHEM 121 (5 cr), MATH 163 (3 cr), PSYC 111 (3 cr), SOCI 111 (3 cr), and three empty rows for additional courses.

D. Major requirements: Total credits: 36

Table with 3 columns of course numbers and credit hours: BIOL 231 (4 cr), BIOL 232 or BIOL 253 (4 cr), CHEM 240 (5 cr), MATH 171 (5 cr), MATH 164 (3 cr), PHYS 211 (5 cr), CHEM 122 (5 cr), PHYS 212 (5 cr), and three empty rows for additional courses.

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

F. Requirements for thesis, internship or other capstone experience: None

G. Any unique features such as interdepartmental cooperation:

The A.S. in Pre-Health is designed to prepare the student to transfer to University of Missouri – Columbia to complete the BS in Biology, prior to taking the Medical College Admission Test (MCAT) and application to the Doctor of Medicine, or Veterinary program at University of Missouri – Columbia.



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## PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

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Institution Name      Three Rivers Community College  
Program Name          A.S. Pre-Health Science  
Date      January 8, 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.)

### 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.  
No special preparation will be required. It is the policy of Three Rivers Community College to maintain and promote educational opportunity without regard to race, color, sex, age, religion, national origin, marital status, disability, veteran's status or other non-merit factors. All populations will be served.

### Faculty Characteristics

- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.  
Normal faculty requirements that exist for those teaching in other transfer education program will be required. Three Rivers Community College will select instructors based on a combination of education and work experience in the respective fields of study where adjunct faculty is used. Adjunct faculty must meet the same academic and professional requirements for teaching of a given course as would be required of full-time faculty 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 80% of the program credit hours will be assigned to full-time faculty.
- Expectations for professional activities, special student contact, teaching/learning innovation.  
The faculty will be expected to use various technologies such as Smart boards, Vernier laboratory data system, internet-based and interactive television (ITV) delivery methods.

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### Enrollment Projections

- Student FTE majoring in program by the end of five years.  
It is anticipated that 40 students will major in the program by the end of five years.
- Percent of full time and part time enrollment by the end of five years.  
Full-time 80%  
Part-time 20%

### Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.  
It is anticipated to have thirty graduates at the end of three years and forty at the end of five years.
- Special skills specific to the program.  
None
- Proportion of students who will achieve licensing, certification, or registration.  
None
- 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 the program graduates will score at or above the 50th percentile on the ETS Proficiency Profile Exam administered during the last semester prior to graduation.
- Placement rates in related fields, in other fields, unemployed.  
It is anticipated that 90% of the graduates from the program will be employed in the field.
- Transfer rates, continuous study.  
It is anticipated that 75% will transfer to a four-year institution for further studies. The courses in the degree program are designed to transfer to four year universities.

### Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. If there are no plans to seek specialized accreditation, please provide reasons.  
There are no state-level accreditations applicable for this A.S. program.

### Alumni and Employer Survey

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- Expected satisfaction rates for alumni, including timing and method of surveys.  
It is estimated that 75% of the students surveyed will indicate that they are satisfied with the program and feel that they are prepared to transfer to a pre-health medicine degree program at a four-year institution.
- Expected satisfaction rates for employers, including timing and method of surveys.  
It is anticipated that 90% of the businesses employing our graduates will be satisfied with the technical skill demonstrated by our graduates.

Program Title: A.S. in Pre-Health Medicine

Degree Type: Associate of Science

Contact: Dr. Mairead Ryan-Anderson

Purpose: The A.S. in Pre-Health Medicine includes the courses need to prepare the student for the University of Missouri - Columbia's BS in Biology, Veterinary and Medical programs.

**FIRST YEAR**

Fall Semester			Hours
ENGL	111	College Writing	3
BIOL	231	Anatomy and Physiology	4
MATH	163	College Algebra*	3
SCOM	110	Public Speaking	3
IST	100	Computer Applications	3
<b>TOTAL HOURS</b>			<b>16</b>

Spring Semester			Hours
BIOL	232 BIOL 253	Anatomy and Physiology II OR Microbiology	4
MATH	171	Analytical Geometry and Calculus I	5
BIOL	190	Biology for Majors	5
ENGL	112	Advanced College Writing	3
<b>TOTAL HOURS</b>			<b>17</b>

**SECOND YEAR**

Fall Semester			Hours
PHYS	211	General Physics I	5
CHEM	121	General Chemistry I	5
PSYC	111	General Psychology	3
SOCI	111	General Sociology	3
<b>TOTAL HOURS</b>			<b>16</b>

Spring Semester			Hours
PHYS	212	General Physics II	5
CHEM	122	General Chemistry II	5
CHEM	240	Basic organic Chemistry	5
<b>TOTAL HOURS</b>			<b>15</b>

For those pursuing the BS in Biology at University of Missouri – Columbia 12-13 hours of the same foreign language or high school equivalent is recommended.