



Missouri Department of Higher Education

Building Missouri's future...by degrees

NEW PROGRAM PROPOSAL FORM

Sponsoring Institution(s): Three Rivers Community College

Program Title: Pre-Pharmacy

Degree/Certificate: A.S. Pre-Pharmacy

Options: none

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

CIP Classification: 51.1103 (Please provide a CIP code)

Implementation Date: Fall 2012

Cooperative Partners:

AUTHORIZATION:

Dr. Wesley Payne, Vice President for Learning

3/30/12

Name/Title of Institutional Officer

Signature

Date

Dr. Wesley Payne

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 pharmacy 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 complete their undergraduate requirements prior to taking the Pharmacy Admissions Test (PCAT) and application to a Doctor of Pharmacy degree program. Students in our service area will have access to a pre-pharmacy option in a more affordable and accessible means.

Based on discussions with students enrolled in science and advanced science classes, some expressed an interest in pursuing a career in pharmacy. They also expressed their concern with being able to smoothly transfer from Three Rivers to a pharmacy program. This option would allow them to more easily make this transition. The assessment of Three Rivers Community College faculty indicated there was a need for a degree option for students interested in this field of study. The demand in pharmacy is expected to grow due to the increased need for prescription medication by an increasing aging population.

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

Year 1	2012-2013	4
Year 2	2013-2014	8
Year 3	2014-2015	12
Year 4	2015-2016	20
Year 5	2016-2017	30

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 in pharmacy. An accredited degree in this field of study is desirable to better prepare the students to take the PCAT and transfer to a Doctor of Pharmacy program. There are jobs in our service area requiring this field of study.

The Occupational Outlook Handbook published by the Bureau of Labor Statistics (BLS) under the Department of Labor indicates that the job outlook for environmental specialists is expected to increase by 17% between 2008 and 2018 which is faster than the average for all occupations. This particular field is expected to grow faster than the average and job prospects should be excellent according to the BLS. The growth in jobs in pharmacy will be driven in part by the increase in the number of middle-aged and elderly segment of the population, advances in drug production and an increase in prescription insurance coverage. There is also a move towards greater involvement of pharmacists in patient care and education. Employment is expected to continue to grow in hospitals, drugstores, grocery stores, and mass retailers. According to BLS, employers in parts of the country are having difficulties finding and retaining a sufficient number of pharmacists. The Missouri Department of Economic Development shows that there were 8,406 licensed pharmacists in Missouri in 2010 with 410 licensed pharmacists in the south central and south east Missouri regions serving a population of approximately 559,300 people. The mean annual salary of pharmacists employed in the region was \$118,742 in south central Missouri and \$122,310 in southeast Missouri. Based on BLS's projected growth rate of 17% over the next 10 years there may be a need for approximately 70 additional pharmacists in the region over the same time period, not taking into account retirement and relocation.

C. Societal Needs

This degree represents an affordable option for preparation for employment for residents of the service area. The Missouri Department of Economic Development's employment statistics for the south central Missouri region showed that over 90% of pharmacists were employed in drugstores, grocery stores or hospitals.

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. 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 pharmacy industry and the expected future need for pharmacists in hospitals, drugstores and groceries, it was determined there is a demand for training of future pharmacists in our service area.

D. 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 2010:
 - ✓ Bureau for Labor Statistics
 - ✓ Missouri Department of Economic Development
- Needs assessment conducted by Three Rivers Community College staff (2011-2012)

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 pharmacy 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 finish their undergraduate work, sit the PCAT and apply to a Doctor of Pharmacy degree program.



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STUDENT ENROLLMENT PROJECTIONS

Year	1	2	3	4	5
Full Time	3	6	9	15	23
Part Time	1	2	3	5	7
Total	4	8	12	20	30

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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-Pharmacy – 60-65 Credit Hours

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

C. General education: Total credits: 27

Courses (specific courses OR distribution area and credits):

Table with 3 columns for course numbers and credit hours. Rows include ENGL 111, BIOL 190, SCOM 110, ENGL 112, CHEM 121, and GOVT 111.

D. Major requirements: Total credits: 33

Table with 3 columns for course numbers and credit hours. Rows include BIOL 211, BIOL 232, CHEM 122, BIOL 221, BIOL 253, PHYS 211, BIOL 231, and ALHE 125.

E. Free elective credits: CHEM 240 5 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:



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PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Institution Name Three Rivers Community College
Program Name A.S. Pre-Pharmacy
Date March 8, 2012

(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 75% 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 30 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 75%
Part-time 25%

Student and Program Outcomes

- Number of graduates per annum at three and five years after implementation.
It is anticipated to have fifteen graduates at the end of three years and thirty 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 an pharmacy 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.

Business, Education, Mathematics, Science and Technology

Associate of Science Degree in Pharmacy

Purpose: The A.S. in Pre-Pharmacy is designed so that students in our service area can take the basic pre-pharmacy requirements through Three Rivers College (TRC). Students would then transfer to complete their undergraduate requirements prior to taking the Pharmacy Admissions Test (PCAT) and admission into a Doctor of Pharmacy degree program. The PCAT tests the following areas (Writing, Verbal ability, Reading Comprehension, Biology (General Biology, Microbiology, Anatomy & Physiology), Chemistry (General, Organic) Mathematics((Algebra, Calculus, Statistics).

FIRST YEAR: Fall Semester

			Hours
ENGL	111	College Writing	3
SCOM	110	Public Speaking	3
CHEM	121	General Chemistry I	5
GOVT	121	National and State Government	3
TOTAL HOURS			14

Spring Semester

			Hours
CHEM	122	General Chemistry II	5
BIOL	190	Biology for Majors	5
ENGL	112	Advanced College Writing	3
MATH	171	Analytical Calculus I	5
TOTAL HOURS			18

SECOND YEAR Fall Semester

			Hours
BIOL	221	Zoology	5
PHYS	211	General Physics I	5
BIOL	231 ⁽¹⁾	Anatomy and Physiology I	4
TOTAL HOURS			14

Spring Semester

			Hours
BIOL	211	Botany	5
BIOL	232 ⁽¹⁾	Anatomy and Physiology II	4
BIOL	253	Microbiology	4
ALHE	125	Medical Terminology	1
CHEM	240 ⁽²⁾	Basic Organic Chemistry	5
TOTAL HOURS			14-19

(1) Two semesters of A & P (BIOL 231 and BIOL 232) are equivalent to Human Anatomy.

(2) Recommended, not required