



## Comprehensive Program Review 2022

Program Name: **Pre-Pharmacy**

Semesters Reviewed:

AY 2020: Fall 2019, Spring 2020, and Summer 2020 AY

2021: Fall 2020, Spring 2021, and Summer 2021

AY 2022: Fall 2021, Spring 2022, and Summer 2022

Completed by: Doug Ecoff

Date: January 2023

### **Assessment Committee Recommendation:**

The committee agrees with the Program Vitality Statement; Category 3 due to changing needs and retirement of full-time faculty member.

### **President's Council Recommendation:**

Council agrees with the Assessment Committee's recommendation of Category 3.

## 1.0 Program Summary

Provide a descriptive summary of the program.

Narrative:

The Pre-Pharmacy program provides most of the courses needed to begin the Pharmacy program at University of Kansas or at other universities.

## 2.0 Student Success

Provide a definition of how student success is defined by the program.

Narrative:

Student success occurs whenever students are accepted into a pharmacy program and become successful pharmacists. Success is also measured by the learning in courses taken by Pre-Pharmacy students and completion.

### 2.1 Achieve/Promote Student Success

Describe how the program achieves and promotes student success. Focus on those activities and innovation that are within the three-year comprehensive cycle.

Narrative:

The Pre-Pharmacy degree of LCC strives to help students to be successful. Some of the ways this is accomplished is as follows.

- Using the apprentice approach in which the instructor shows how to work problems followed by students working similar problems in class. Hands-on helps students to better understand how to problem solve and helps them to be more attentive in class.
- Tests that can be retaken in which the retake tests are similar, but not the same as the original. This gives the students another chance to learn the materials.
- Applying concepts to real-life occurrences, which helps students see relevance to the courses.
- Creating and revising experiments to help students better understand concepts and develop laboratory techniques.
- The faculty keep current on new developments in the field.

### 3.0 Reflection on Current Curriculum

Please describe curriculum holistically, speaking specifically to the breadth, depth, and level of the discipline. Additionally, provide narrative on the coherence of the curriculum and the processes by which the program updates and keeps curriculum relevant.

Narrative:

The course requirements for entry into the University of Kansas Pharmacy program have changed. The LCC catalog will reflect these changes. These include the following additional courses LCC requires and courses LCC will not offer.

<b>Additional Courses that LCC Offers</b>	<b>Courses LCC Will Not Offer</b>
Math 120 Elementary Statistics	Organic Chemistry 1
PHYS 201 College Physics 1 (no longer wave if B or higher in high school physics)	Organic Chemistry 2
	Physiology (after taking Anatomy and Physiology)

Currently, general education courses that Kansas University requires and those that LCC require are not synchronized, but they may be in the future.

### 3.1 Degrees and Certificate Offerings

List what degrees and certificates are offered and describe how the program curriculum supports other degrees and certificates awarded by the college (if applicable).

Narrative:

Labette Community College provides the Associate in Science degree for Pre-Pharmacy.

# PRE-PHARMACY

## ASSOCIATE IN SCIENCE

The Pre-Pharmacy degree is designed to provide students with the basic pre-pharmacy requirements needed for entrance into the KU Pharmacy program. Students transferring to a different 4-year college should contact the advisor at that university to ensure transferability of coursework. It is the student's responsibility to follow the transfer requirements for his/her transfer institution.

**Credits Required:** 68-70

**Major Advisor:** Dr. Doug Ecoff  
620-820-1151  
douge@labette.edu

### Recommended Course Sequence

**SEM 1:** BIOL 128, CHEM 124

**SEM 2:** BIOL 130, CHEM 126

**SEM 3:** BIOL 201, CHEM 204

**SEM 4:** CHEM 207

### After Graduation

According to the U.S. Department of Labor's 2015 Occupational Handbook, the annual salary for Pharmacists is \$121,500.

KU School of Pharmacy accepts 68 transfer credits

<u>Concentration Requirements</u>			<u>35</u>
<input type="checkbox"/>	BIOL 128	Principles of Biology I	5
<input type="checkbox"/>	BIOL 130	Anatomy & Physiology	5
<input type="checkbox"/>	BIOL 201	Microbiology	5
<input type="checkbox"/>	CHEM 124	College Chemistry I	5
<input type="checkbox"/>	CHEM 126	College Chemistry II	5
<input type="checkbox"/>	CHEM 204	Organic Chemistry I	5
<input type="checkbox"/>	CHEM 207	Organic Chemistry II	5

<u>Pathway Requirements</u>			<u>33-35</u>
<b>Written Communication</b>			
<input type="checkbox"/>	ENGL 101	English Composition I	3
<input type="checkbox"/>	ENGL 102	English Composition II	3
<b>Verbal Communication</b>			
<input type="checkbox"/>	COMM 101	Public Speaking	3
<b>Quantitative/Analytic Methods</b>			
<input type="checkbox"/>	MATH 130	Calculus I	5
<b>Human Experience</b>			
	Choose one class		
<input type="checkbox"/>	_____		3
<b>Human Systems/No companion Elements</b>			
	Choose one class		
<input type="checkbox"/>	_____		3
<b>Human Systems/Diverse Perspectives</b>			
	Choose two classes		
<input type="checkbox"/>	_____		3
<input type="checkbox"/>	_____		3
<b>Human Systems/Social Responsibility</b>			
	Choose one class		
<input type="checkbox"/>	_____		3
<b>Natural World/Scientific Inquiry</b>			
	Met in Concentration		
<b>Wellness Strategies/No Companion Elements</b>			
	Choose one class		
<input type="checkbox"/>	_____		1-3
<b>Wellness Strategies/Scientific Inquiry</b>			
<input type="checkbox"/>	PSYC 101	General Psychology	3

## 4.0 Faculty Success

Faculty success over the three-year comprehensive cycle should be highlighted in this section. The accomplishments can embrace academic achievement in the discipline, national or regional honors, campus activities that support student success, or other innovations, research, teaching, and community service.

Narrative:

Faculty keep abreast of current trends in their fields by watching webinars and reading journals such as the Chemical and Engineering News.

Community activities of Douglas Ecoff include:

- On the Board of Directors and volunteering for the Care Cupboard which provides non-food products to the disadvantaged in the community.
- Volunteer at First Baptist Church as Sunday School teacher and as video and sound technician.
- Volunteer for Stella Wells which provides food during the Christmas season for the disadvantaged in the community
- Volunteered for Food Pantry at LCC
- Advisor to Cardinal Christian Fellowship

## 5.0 Program Accomplishments and Reflection on Data/Trends

In this section, departments should highlight noteworthy program accomplishments over the three-year comprehensive cycle. Programs should also provide thoughtful reflection on the data provided on student success, attrition, completion, etc. Programs should also report on findings from course and program assessment data. Programs should also provide context of any trends in the data, as well as external trends that may have affected the data.

Narrative:

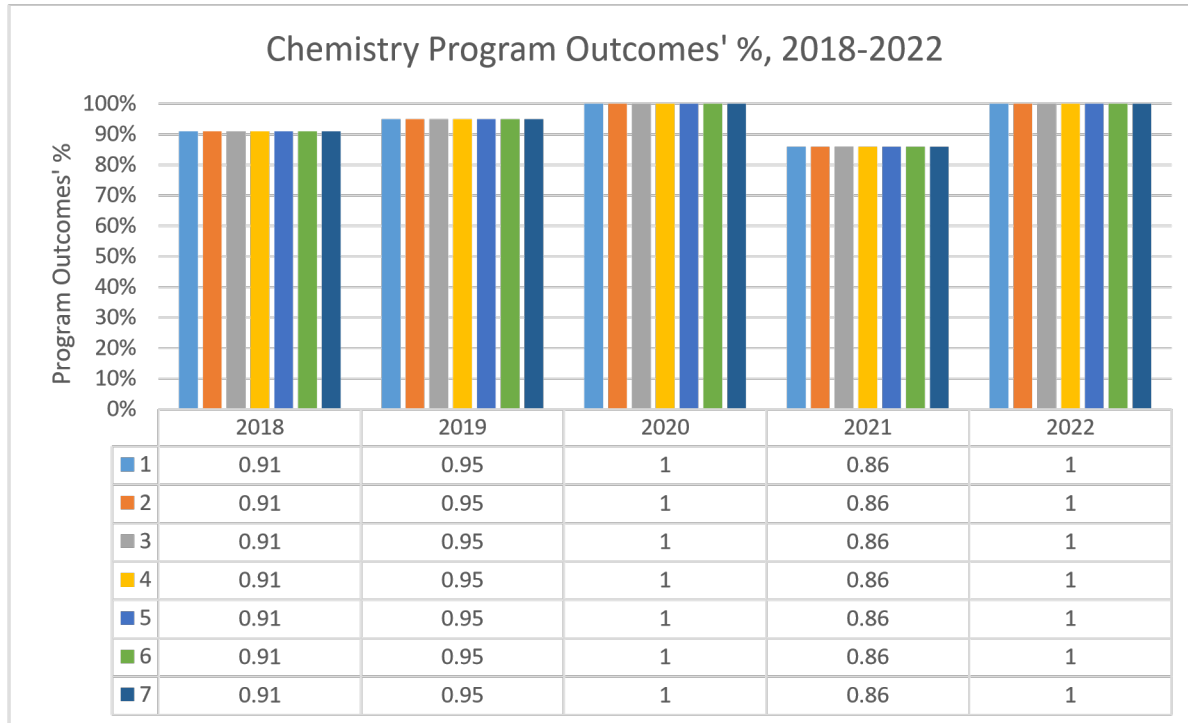
Accomplishments:

The completion rate for chemistry classes is high. While enrollment in Chemistry courses fell over the last three years, enrollment in A&P and Microbiology stayed steady. This is due to the number of Biology courses required as pre-reqs for health science programs, but not necessarily Chemistry courses because they are no longer required as pre-reqs for programs as they were several years ago.

Main campus is still strongest when it comes to enrollment in Pre-Pharmacy classes, with online following next, and then concurrent. There has only been 1 Pre-Pharmacy degree awarded in the last 3 years, but many students at LCC have been accepted into University of Kansas Pharmacy and other pharmacy programs and are currently working pharmacists. For example, in the past two years, four students out of five have been accepted into the Pharmacy Program at Kansas University. The one person not accepted will not apply until next year.

Pre-Pharmacy courses are still heavily taught by full-time faculty versus adjuncts, with the data showing 85% of credit hours taught by full-time faculty and 15% taught by adjuncts.

While Pre-Pharmacy is a stand-alone program in the catalog, it was not treated as such when it came to program review and program assessment. This will be changing moving forward, with the program having its own program outcomes and program review.



1. What did you learn from this past year's program data?

- There was an increase from 2018 to 2019 in outcome levels and I would attribute this to notebook changes and addition of lecture and laboratory videos to the courses.
- There was a marked drop after 2019. I would attribute this to the pandemic and shift to on-line learning.

2. What did you not learn from the data?

- Details about the needs or problems associated with each individual course.

3. What do you hope to learn and/or do for this upcoming school year?

- Perhaps to determine more ways online can be used, but without detrimental loss of student learning.

## 6.0 Mission Alignment

Programs should indicate how the program's offerings align with the LCC mission: Labette Community College provides quality learning opportunities in a supportive environment for success in a changing world.

Narrative:

The Chemistry department of LCC strives to help students to be successful. Some of the ways this is accomplished is as follows.

- Using the apprentice approach in which the instructor shows how to work problems followed by students working similar problems in class. Hands-on helps students to better understand how to problem solve and helps them to be more attentive in class.
- Tests that can be retaken in which the retake tests are similar, but not the same as the original. This gives the students another chance to learn the materials.
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- The faculty keep current on new developments in the field.

## 7.0 Fiscal Resource Narrative

Based on program data review, planning and development for student success, programs will complete the budget worksheet to identify proposed resource needs and adjustments. Resource requests should follow budgeting guidelines as approved by the Board of Trustees for each fiscal year. The resource requests should be used to provide summary and detailed information to the DOI/VPAA and other decision-makers and to inform financial decisions made throughout the year. In the narrative below, please explain any requests for additional dollars over the current academic year budget, then include the budget amounts on the budget worksheet.

Narrative:

The Pre-Pharmacy program does not have its own budget. It shares resources from both the Chemistry and Biology programs/budgets.

## 8.0 External Constituency and Significant Trends

An important component of maintaining a superior program lies in awareness and understanding of other possible factors that may impact the program and/or student outcomes. After consideration of these other factors, program directors/faculty should document the relevant information within this section.

### Program Advisory Committee:

None

### Other External Constituencies:

The course requirements for entry into the University of Kansas Pharmacy program has changed. The LCC catalog will reflect these changes. These include the following additional courses LCC requires and courses LCC will not offer.

Additional Courses that LCC Offers	Additional Course LCC Will Not Offer
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Currently, general education courses that Kansas University requires and those that LCC require are not synchronized, but they may in the future.

### Significant Trends:

**Below is the job outlook information from the U.S. Bureau of Labor Statistics.**

Employment of pharmacists is projected to grow 2 percent from 2021 to 2031, slower than the average for all occupations.

Despite limited employment growth, about 13,600 openings for pharmacists are projected each year, on average, over the decade. Most of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire.

The median annual wage for pharmacists was \$128,570 in May 2021.



## 9.0 Program Vitality Assessment

Program faculty should use all available information to consider the category assignment which best reflects the program's current status and subsequent goals and anticipated action plans.

### **Vitality Category Chosen:** Category 3—Revitalization Opportunities or Needs

Enrollment in the Pre-Pharmacy program is difficult to determine because not all students who plan to be pharmacists major in Pre-Pharmacy. Many are Pittsburg State University students who do not state a major and only take a few classes at LCC however, from what I have observed that while the number of students who wish to be pharmacists are relatively small, they do seem to be consistent.

#### Vitality Indicators that Could Impact Chosen Category

It is recommended that the Pre-Pharmacy program of LCC be continued, but the course requirements will have to be changed. Organic Chemistry 1 and 2 are recommended for discontinuance at least in the near future.

## 10.0 Program Goals

Each program should set 1-3 short-term goals (will be completed in the next year) and 1-3 long-term goals (will be completed by next comprehensive program review). These goals should be SMART goals that can be reflected upon in the upcoming annual or comprehensive review.

These, below, are the same as stated in the Chemistry Program Review.

### **Short-Term:**

1. To increase enrollment and to increase flexibility of scheduling by adding online courses.
2. To improve financial vitality by removing Organic Chemistry 1 and 2 as offerings for the near future.

### **Long-Term:**

To develop laboratory videos for College Chemistry 2 so students will clearly know how to do the on-ground experiments. Quality of the videos will be judged by student surveys, laboratory report improvements, and observations by instructor during laboratory work. If these indicators warrant it, the videos could be replaced by better videos.



Note: All Definitions of data pulled for this summary can be found in Appendix 1 of the Academic Program Review, Planning, and Development Handbook.

### Program: Pre-Pharmacy

#### Average Class Size, Completer Success, and Attrition

Year (AY dates)	Subject Prefix	Course Name	Total Enrollment	# of Sections	Average Class Size	% Student Completion	%Student Success	%Student Attrition	Student Credit Hours
2020	CHEM 124	College Chem I	80	9	9	84%	81%	16%	400
2021			65	7	9	92%	77%	8%	325
2022			41	4	10	95%	83%	5%	205
2020	CHEM 126	College Chem II	8	1	8	88%	88%	12%	40
2021			8	1	8	88%	75%	12%	40
2022			10	1	10	100%	100%	0%	50
2020	CHEM 204	Organic Chem I	5	1	5	100%	100%	0%	25
2021			3	2	2	100%	100%	0%	18
2022			9	1	9	78%	78%	22%	45
2020	CHEM 207	Organic Chem II	2	1	2	100%	100%	0%	10
2021			4	2	2	100%	100%	0%	20
2022			5	1	5	100%	100%	0%	25
2020	BIOL 128	Principles of Biology I	62	5	12	94%	84%	6%	310
2021			48	4	12	85%	83%	15%	240
2022			46	4	12	91%	87%	9%	230
2020	BIOL 130	Anatomy & Physiology	220	13	17	87%	78%	13%	1,100
2021			219	13	17	88%	79%	12%	1,095
2022			236	12	20	86%	77%	14%	1,180
2020	BIOL 201	Microbiology	85	8	11	88%	78%	12%	425
2021			84	8	11	74%	61%	26%	420
2022			84	8	11	75%	65%	25%	420

#### Course Completion, Success, & Attrition by Location

Year (AY dates)	Location	Total Enrollment	# of Sections	Average Class Size	% Student Completion	%Student Success	%Student Attrition	Student Credit Hours
2020	Cherokee	70	5	14	86%	71%	14%	350
2021		31	2	16	74%	65%	26%	155
2022		64	5	13	80%	70%	20%	320
2020	Online	86	4	22	88%	77%	12%	430
2021		139	10	14	84%	77%	16%	695
2022		133	12	11	85%	80%	15%	665
2020	Main Campus	205	16	13	82%	73%	18%	1,025
2021		183	17	11	84%	70%	16%	915
2022		168	10	17	82%	69%	18%	840

2020	Concurrent	101	10	10	100%	98%	0%	505
2021		78	6	13	96%	92%	4%	390
2022		65	5	13	100%	97%	0%	325
2020	Other (Arrg, Off-campus, etc.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2021		N/A	N/A	N/A	N/A	N/A	N/A	N/A
2022	N/A	1	1	1	100%	100%	0%	5

Declared Awards, Transfers, and Placements

Year (AY Dates)	# of Degrees/Certs Awarded	# of Graduates Transferring from previous AY year	% Placement Rate for Graduates (CTE Only)
2020	0	0	N/A
2021	0	0	N/A
2022	1	0	N/A

Student Credit Hours by Faculty Type

Year (AY)	Number of Faculty		Student Credit Hours by Faculty Type				Total Credit Hours
	Full Time	Part Time	Full Time	% for Full Time	Part Time	% for Part Time	
2020	4	6	*	*	*	*	*
2021	4	4	1,715	79%	460	21%	2,175
2022	4	3	1,865	85%	325	15%	2,190

\*Data not pulled by credit hours for this year

Faculty Name by Type for Most Recent Academic Year

Full Time: Douglas Ecoff, Tom Brungardt, Archana Lal

Part Time: Cordaro Baldwin, Arthur Commons, Chance Curran