

**INSTITUTIONAL PROGRAM REVIEW 2010-11**  
**Program Efficacy Phase, Spring, 2011**

**Purpose of Institutional Program Review**

Welcome to the Program Efficacy phase of the San Bernardino Valley College Program Review process. Program Review is a systematic process for evaluating programs and services annually. The major goal of the Program Review Committee is to evaluate the effectiveness of programs, and to make informed decisions about budget and other campus priorities.

The Institutional Program Review Committee is authorized by the Academic Senate to develop and monitor the college Program Review process, receive unit plans, utilize assessments as needed to evaluate programs, recommend program status to the college president, identify the need for faculty and instructional equipment, and interface with other college committees to ensure institutional priorities are met.

The purpose of Program Review is to:

- Provide a full examination of how effectively programs and services are meeting departmental, divisional, and institutional goals
- Aid in short-range planning and decision-making
- Improve performance, services, and programs
- Contribute to long-range planning
- Contribute information and recommendations to other college processes, as appropriate
- Serve as the campus' conduit for decision-making by forwarding information to or requesting information from appropriate committees

Our Program Review process is two-fold. It includes an annual campus-wide needs assessment in the fall, and an in-depth review of each program every three years that we call the Program Efficacy phase. Instructional programs are evaluated the year after content review, and every three years thereafter, and other programs are placed on a three-year cycle by the appropriate Vice President.

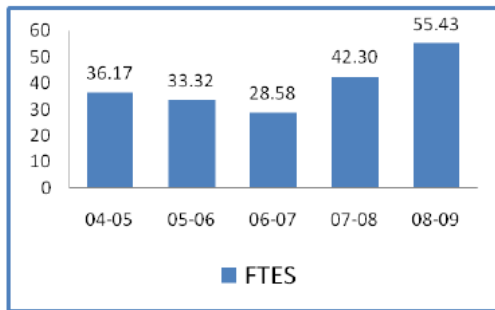
An efficacy team of two disinterested committee members will meeting with you to carefully review and discuss your document. You will receive detailed feedback regarding the degree to which your program is perceived to meet institutional goals. The rubric that the team will use to evaluate your program is included with this e-mail

When you are writing your program evaluation, you may contact efficacy team assigned to review your department or your division representatives for feedback and input. The list of readers is being sent to you with these forms as a separate attachment.

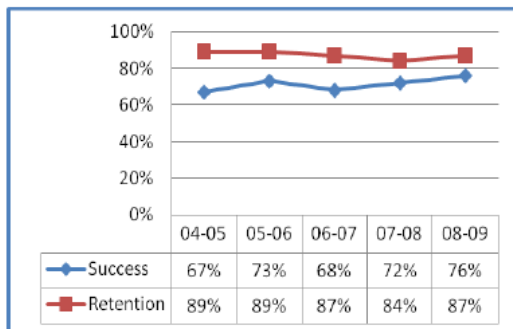
Forms are due back to the Committee Chairs, Efficacy Team and Division Dean by **March 17, 2011**.  
*It is the writer's responsibility to be sure the Committee receives the forms on time.*

In response to campus wide feedback that program review be a more interactive process, the committee piloted a new program efficacy process in Spring 2010 that included a review team who will interviews and/or tour a program area during the efficacy process. Another campus concern focused on the duplication of information required for campus reports. The efficacy process will incorporate the Educational Master Plan One-Page Summary (EMP Summary) and strive to reduce duplication of information while maintaining a high quality efficacy process.

## Pharmacy Technology



	04-05	05-06	06-07	07-08	08-09
Duplicated Enrollment	320	305	260	316	402
FTEF	2.05	2.05	2.05	1.92	2.14
WSCH per FTEF	529	488	418	661	777



	04-05	05-06	06-07	07-08	08-09
Sections	12	12	12	12	12
% of online enrollment					
Degrees awarded	10	10	7	9	15
Certificates awarded	7	9	9		14

### Description:

The program prepares students to work as Pharmacy Technicians in community pharmacies, providing medications and other healthcare products to patients under the supervision of a pharmacist. The program prepares students to pass the California Pharmacy Technician licensing examination. Twenty-four units are required for the certificate including MATH 952 or higher and ENG 015 or higher. The AS degree requires students take an additional biology course, general breadth requirements, and associate degree level math (MATH 095) and English (ENGL 101).

### Assessment:

- Enrollment in the program has grown by 53.2% over the last five years while the FTEF has only increased slightly.
- The efficiency (WSCH/FTEF) is very high. The WSCH/FTEF for 2008-2009 was an unprecedented 777.
- The retention data demonstrate only minor fluctuation while the success data indicate an overall improvement (9%) over the span of the data.
- Since most students in the program are seeking employment and state certification, the number of students earning the AS degree was low and saw no increase just minor fluctuations.

### Program Goals:

The employment opportunity for pharmacy technicians, according to the Center for Excellence, indicates significant growth in the Inland Empire (20% growth expected from 2009-2014) and the program currently offers only one section of each class. A program goal is

- To meet the demand for jobs. There is a growth of about 600 positions from 2009 to 2014. A ten year projection predicts a 35% increase in jobs in the Inland Empire.
- To offer more sections of first semester classes to increase enrollment in second semester classes and more graduates. The number of intern.
- To demonstrate the need for a full-time faculty to coordinate program growth and maintain quality.

### Challenges & Opportunities:

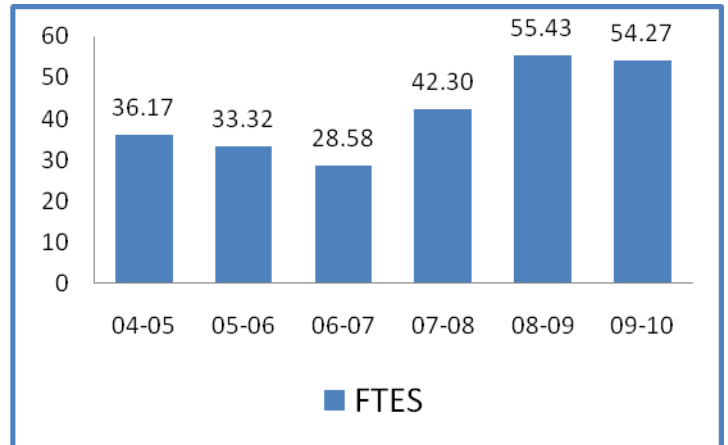
- Provide class space for the many students trying to enroll in the courses due to increased opportunities for employment.
- Nurture partnerships and develop more internship opportunities since this is required component of the program.
- Develop support for a full time faculty to help the program grow and provide continuity. Currently the classes are taught only by adjunct.
- Since the program has no budget, develop a budget for supplies.

### Action Plan:

- Strengthen advisory committee to provide liaison for increased internship sites.
- Review curriculum to develop a pharmacology review course for other health care professions allowing the current pharmacology course to focus on content for pharm techs.
- Increase course offerings for first semester classes.
- Update equipment and software used in the course.
- Advocate for a full time faculty member.

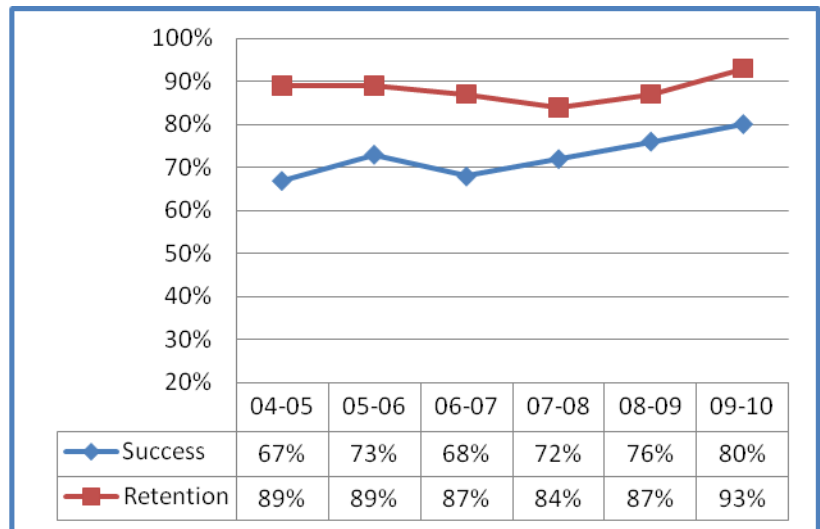
Updated EIS Data Pharmacy Tech 2004-2010

	FTES
04-05	36.17
05-06	33.32
06-07	28.58
07-08	42.30
08-09	55.43



	04-05	05-06	06-07	07-08	08-09	09-10
Duplicated Enrollment	320	305	260	316	402	382
FTEF	2.05	2.05	2.05	1.92	2.14	3.02
WSCH per FTEF	529	488	418	661	777	539

	Success	Retention
04-05	67%	89%
05-06	73%	89%
06-07	68%	87%
07-08	72%	84%
08-09	76%	87%
09-10	80%	93%



	04-05	05-06	06-07	07-08	08-09	09-10
Sections	12	12	12	12	12	12
% of online enrollment						
Degrees awarded	10	10	7	9	11	12
Certificates awarded	7	9	9		14	19

## Program Efficacy, Spring 2011

Complete and attach this cover sheet as the first page of your report.

### Program Being Evaluated

Pharmacy Technology

### Name of Division

Science and Health Science

### Name of Person Preparing this Report

Susan Bangasser

### Extension

8650

### Name of Department Members Consulted

Yvonne Furr, Susaniel Kesling, Majid Seraj, Robyn Seraj

### Name of Reviewers

Celia Huston, Kevin Kammer

### Program Review Committee Representatives

Sheri Lillard, Yolanda Simental, Sandra Waters

Work Flow	Due Date	Date Submitted
Date of initial meeting with department	2/21/11	3/10/11
Final draft sent to the dean		3/15/11
Report submitted to Program Review Team		3/25/11
Meeting with Review Team		

### Staffing

List the number of full and part-time employees in your area.

Classification	Number Full-Time	Number Part-time, Contract	Number adjunct, short-term, hourly
Managers	1	0	0
Faculty	0	0	4-5
Classified Staff	0	0	0
<b>Total</b>	1	0	4-5

**Part I. Questions Related to Strategic Initiative: Access**

Use the demographic data provided to describe how well you are providing access to your program by answering the questions below.

**Demographic Information:** Pharmacy 2007-2010

**Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	blank	13	.6	.6	.6
	F	1575	73.8	73.8	74.4
	M	547	25.6	25.6	100.0
	Total	2135	100.0	100.0	

**Ethnicity**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	blank	137	6.4	6.4	6.4
	A	240	11.2	11.2	17.7
	B	343	16.1	16.1	33.7
	F	65	3.0	3.0	36.8
	H	920	43.1	43.1	79.9
	N	30	1.4	1.4	81.3
	O	12	.6	.6	81.8
	P	10	.5	.5	82.3
	W	302	14.1	14.1	96.4
	X	76	3.6	3.6	100.0
	Total	2135	100.0	100.0	

Disability	Frequency	Dept. Percent	Campus Pct.
No disability	2022	94.7%	95.5%
Disabled	113	5.3%	4.5%
Total	2135	100%	100%

Average Age	N	Youngest	Oldest	Avg. Age Dept.	Avg. Age Campus
	2135	17	57	27.80	29.1

Does the program population reflect the college's population? Is this an issue of concern? If not, why not? If so, what steps are you taking to address the issue?

The program serves more women than men (73.8% women). The higher percent of women in the field of study is consistent with the national trend in increased percentages of females entering the various roles in the pharmacy industry. According to “**The Impact of a Gender Shift on a Profession: Women in Pharmacy**” authors Stephanie F. Gardner and Cindy D. Stowe describe the increased interest by women in the field of pharmacy. Also the fact sheet from the AFL-CIO for 2010, PHARMACISTS AND PHARMACY TECHNICIANS: FACTS AND FIGURES, states that enrollment in pharmacy schools has a higher population of women, 59.2%. (Found at <http://dpeaflcio.org/wp-content/uploads/2010/08/PHARMACISTS-AND-PHARMACY-TECHNICIANS-2010.pdf>)

The working conditions themselves may be more attractive to women, such as flexible hours, and in fact the previous report provides the fact that 64% of all part-time positions in pharmacy are held by women.

The average age is slightly younger (27.81) than the colleges (29.1). The age average is not a concern since the increased need for trained pharmacy technicians many younger students are making this career choice. The program reflects the ethnic diversity of the campus, with 43.1% Hispanic in Pharmacy Technology. The percent disabled students (5.3%) is slightly higher than the campus average (4.5%).

### Pattern of Service

How does the pattern of service and/or instruction provided by your department serve the needs of the community? Include as appropriate hours of operation/pattern of scheduling, alternate delivery methods, weekend instruction/service.

There are a total of 6 courses in the Pharmacy Technology program and all 6 are offered each semester. Three of the courses PHT020 (Introduction to Pharmacy Technology), PHT 030 (Pharmacology), and PHT 040 (Pharmacy Calculations) are considered first semester courses. PHT 041 (Pharmacy Systems), PHT 042 (Pharmacy Intern Seminar), and PHT 043 (Clinical Experience) require early courses as prerequisites and further refine the skills needed by a Pharm Tech. The clinical experience course places students into pharmacies as interns. The Pharmacy Intern Seminar course prepares students to take the state licensing exam. This is the only program in the health sciences area of the Science Division that allows students to simply enroll in the courses; i.e. there is no application process. Two of the first semester courses, pharmacy calculations and pharmacology, are popular with students waiting for admission into the nursing program or already in an allied health area. So those courses serve a variety of community needs. The PHT courses are predominantly offered in the evening. One of the courses PHT041, Pharmacy Systems, is an afternoon course, since the adjunct faculty teaches this on her day off from work at Loma Linda University. Although there is a need for increased sections of the classes, by offering the classes in the evenings more students have access to them. Also, all the courses are taught by adjunct and these working professionals are more readily available in the evening. If the program

could offer more sections a pattern of day as well as evening would be desirable.

## **Part II: Questions Related to Strategic Initiative: Student Success**

Provide a brief analysis of the data and narrative from the program's EMP Summary and discuss what it reveals about your program. (Use data from the second two charts of the EMP One-Sheet on page 2 of this form)

The data reflect a steady growth in FTES over the past 6 years with an average of 54.3 in 2009-2010 and a duplicated enrollment of 382 students. Although there was an overall growth pattern, a slight decrease of around 1 FTES in 2009-2010 occurred. The program is taught by only adjunct faculty, however, there is load for 3 full time faculty. The adjunct faculty are committed to their students as evidenced by increasing success (80% in 2009-2010) and retention (93%). Over the six year period of data the number of degrees remained fairly stable with minor fluctuations, starting at 10 in 2004-2005 and reaching 12 in 2009-2010. To find employment as a Pharmacy Technician, both the training received for the certificate and also passing the state licensing exam are important. The number of certificates increased from 7 in 2004-2005 to 19 in 2009-2010. In summary the data reveal a successful program that is at capacity when limited to one section of each class. Although there are periodic changes in some of the adjunct faculty as they explore advanced careers, recruiting committed faculty is critical to the success of the program.

### **Supplemental Data**

Provide any additional information such as job market indicators, standards in the field or licensure rates that would help the committee to better understand how your program contributes to the success of your students.

The Inland Empire Center for Excellence evaluated the occupational indicators for Pharmacy Technicians in their 2009 report. The growth is projected to grow 19.78% in 5 years with a total change in 599 additional jobs. The ten year growth is 34.64% with an additional 1,049 jobs. The growth in the state of California over the five year period of 2009-2014 was 19%. The data may represent a low estimate since only technicians working in hospitals and supermarket pharmacies are recorded and those working in drug stores, such as CVS and Walgreens were not included, suggesting a coding error by the state. The Bureau of Labor Statistics reported in the 2010-2011 edition a 31% national increase in pharmacy technicians between 2008-2018 and this report includes replacement positions. They report that the technicians' role will continue to be expanded in the pharmacy as pharmacists become more involved with patient care.

Our students' have a high pass rate for the nationally accredited exam from the Pharmacy Technician Certification Board (PTCB). For fall 2010, 19 students completed PHT042, 17 students passed the exam, and one postponed taking the exam.

At a meeting of the Pharmacy Technology Advisory Committee on Feb. 21, 2011, the program was evaluated and discussion items from the meeting are being considered to further improve the program. The faculty will explore collaborations to provide more opportunities for our students to intern in hospital pharmacies. Adding a prerequisite of BIOL 155 (one semester course in Anatomy and Physiology) is being considered before students take pharmacology.

## Student Learning Outcomes

SLO's were developed in 2007 for each course and the program. They are on the Instruction Website under Science and then Health Science. They can be found at this URL [http://depts.valleycollege.edu/SLO/index.php?CurrentDir=%2FScience+%26+Health+Science%2FHealth\\_Science%2FPHT%2F](http://depts.valleycollege.edu/SLO/index.php?CurrentDir=%2FScience+%26+Health+Science%2FHealth_Science%2FPHT%2F) SLO assessment three-year plan is included.

PHT 020	Introduction to Pharmacy Technology
PHT 030	Pharmacology
PHT 031	Pharmacy Calculations
PHT 041	Pharmacy Systems
PHT 042	Pharmacy Intern Seminar
PHT 043	Pharmacy Clinical Experience

## Program Level SLO's

The list above shows the courses that have SLOs on file with the Office of Instruction.

If you have courses for which SLOs have not been developed, explain why. What are your plans to remedy this?

SLO's have been developed for all the courses in the Pharmacy Technology Program as well as the certificate and the degree.

## Attach your three-year plan for assessing SLOs.

What progress has the program made in its three-year plan? Have you implemented any program changes based on assessment results?

Progress has been made on the three year plan with two courses remaining to be assessed this spring, PHT 031 and PHT 041. Program changes were made in PHT 020 as a result of assessment. A new tool has been developed and is being evaluated this academic year. The evaluation form of student interns has been modified for use in PHT 043.



**Mission and Purpose:**

*SBVC Mission: San Bernardino Valley College provides quality education and services that support a diverse community of learners.*

What is the purpose of the program?

The purpose of the Pharmacy Technology Program is to prepare students for entry level employment as a pharmacy technician providing medications and other healthcare products to patients and consumers.

How does this purpose relate to the college mission?

The program provides education and training to students who then have the ability to work in the field. The faculty strive for quality in classroom and lab. Internships are integrated into the program thereby providing experience in the field.

**Productivity**

Provide additional analysis and explanation of the productivity data and narrative in the EMP Summary, if needed. (Use data from the first two charts of the EMP One-Sheet on page 2 of this form)

The Pharmacy Technology program is productive as evidenced by the increasing FTES over the past six years. There is no room for growth unless sections are added. The second semester courses have a lower CAP since PHT 041 has a lab and PHT 043 provides internships for students. Nevertheless, the WSCH/FTES for 09-10 was 539. The WSCH/FTES for 08-09 is listed as 777 but that seems to be either inaccurate or an anomaly.

## Relevance and Currency, Articulation of Curriculum

If applicable to your area, describe your curriculum by answering the following questions.

The Content Review Summary from CurricUNET indicates the programs current curriculum status. If curriculum is out of date, explain the circumstances surrounding the error and plans to remedy the discrepancy.

Science				
Pharmacy Technology				
	Course	Status	Last Content Review	Next Review Date
	PHT020 Introduction to Pharmacy Technology	Active	11/15/2006	11/15/2012
	PHT030 Pharmacology	Active	05/09/2005	05/09/2011
	PHT031 Pharmacy Calculations	Active	11/15/2006	11/15/2012
	PHT041 Pharmacy Systems	Active	09/22/2008	09/22/2014
	PHT042 Pharmacy Intern Seminar	Active	11/15/2006	11/15/2012
	PHT043 Pharmacy Clinical Experience	Active	11/15/2006	11/15/2012

The department has had several meetings over the past two years after it became incorporated into the Science Division. The entire curriculum for PHT is current although curriculum changes have been identified and are still under discussion. One change is to add a lab to PHT 020, Introduction to Pharmacy Technology, and another is to add Anatomy and Physiology prerequisite (BIOL 155 or higher) for PHT 030, Pharmacology. All changes need more discussion and any curriculum changes will be made at the same time and submitted as a package in fall 2011 to be implemented in the 2012-2013 academic year.

List Courses above 100 where articulation is <b>not</b> occurring	With CSU	With UC
NA	NA	NA

Describe your plan to articulate these classes.

The courses in the Pharm Tech program are Associate Degree applicable but do not articulate. A student planning to become a pharmacist follows a very different educational plan.

### Currency

Review the last college catalogue data given below. **OR**

Follow the link below and review the last college catalog data. Pharmacy Technology begins on p.157  
[http://www.valleycollege.edu/Instruction/Files/Catalog/2010-2011/SBVC\\_Catalog\\_1011\\_Complete.pdf](http://www.valleycollege.edu/Instruction/Files/Catalog/2010-2011/SBVC_Catalog_1011_Complete.pdf)

Is the information given accurate? Which courses are no longer being offered? (Include Course # and Title of the Course). If not, how does the program plan to remedy the discrepancy?

The information in the College Catalog, p. 157-158 is accurate.

### **Planning**

What are the trends, external to the institution, impacting your student enrollment/service utilization? How will these trends impact program planning?

The increased need for pharmacy technicians has impacted the program. The current state budget dilemma has impacted the district and prevents offering multiple sections. In the meantime, for-profit institutions, such as UEI in San Bernardino, are now offering pharmacy technology courses. The cost of these programs outweighs the salary earned by Pharm Techs (averages \$16.27/hour.) In order to best continue serving students we plan to maintain the current program and fill it at full capacity. When the college has growth money the program will apply for increased funding for more sections. At that time we plan to compare the cost of a private education to the cost of a community college education and use it as a marketing tool to demonstrate to students the value of a community college education

### Accomplishments and Strengths

Referencing the narratives in the EMP Summary, provide any additional data or new information regarding the accomplishments of the program, if applicable. In what way does your planning address accomplishments and strengths in the program?

Additional data was stated previously about the pass rate of the licensing exam, indicate that 17 of 18 students who took the exam after Fall 2010, passed the exam. This data demonstrates the success of the students in the program. Our program planning and advisory input strengthen the program since we will seek new partnerships for clinical experiences for the students (outcome of Advisory Committee meeting), request funds for specialty equipment for practicing sterile techniques (in Needs Assessment), and will move the course PHT 041, Pharmacy Systems, to a chemistry lab in the new building starting this fall so the class can access the glassware and balances in the laboratory. Other areas being considered in the strategic plan is the addition of lab to PHT 020 and requiring the one semester Anatomy and Physiology course for pharmacology. These changes increase the quality of the content and support student learning.

#### Weaknesses

Referencing the narratives in the EMP Summary, provide any additional data or new information regarding planning for the program. In what way does your planning address trends and weaknesses in the program?

The trend is for increased enrollment due to increased job opportunities. A weakness is that classes are impacted by students in multiple allied health careers not just those pursuing Pharm Tech. Plans include advocating to offer two sections of PHT 020 to reach more students considering Pharmacy Technology as a career. This addresses the trend for increased interest enrollment in the program. Another plan that we would like to incorporate is to offer two sections of Pharmacology, one for students in the Pharm Tech program and one for students in other allied health programs since the approach and application are different for these groups. The current Pharmacology course was developed for the pharmacy technology program but attracts a many persons pursuing or working in other allied health areas. Two courses will provide an appropriate focus of content for the faculty to present to students. The planning also includes the request of a full time faculty member to provide guidance, curriculum development and continuity of relationships with partners.

#### **V. Questions Related to Strategic Initiative: Technology, Campus Climate and Partnerships.**

Describe how your program has addressed the strategic initiatives of technology, campus climate and/or partnerships.

The Pharmacy Technology addresses all three strategic initiatives.

##### Technology

The students in this program share some of the software used by Nursing. The students learn to enter the patient information and to print the correct labels for the prescriptions. Computer skills are essential for employment as a Pharmacy Technician. Successful use of computers and software support the technology initiative. The program plans to have a stronger web presence when the new college web site rolls out. The adjunct faculty also plan to provide more supporting materials for their courses on Blackboard, particularly the pharmacology and the seminar course.

##### Campus Climate

The Pharmacy Technology Program supports a positive campus climate by providing training for students that clearly leads to employment. Some courses provide an additional purpose of providing improved understanding and skills for other health professions, such as nursing.

### Partnerships

This program excels at supporting partnerships since placing the students in pharmacy technology clinical experiences requires collaborations with pharmacies such as Walgreens and CVS and hospital based pharmacies such as Loma Linda University Hospital and San Bernardino Community Hospital. An increased level of partnership with San Bernardino Community Hospital is being explored to provide more opportunities for student participation in sterile techniques.

<b>PHARMACY TECHNOLOGY -- SLO Assessment plan</b>							
	<b>Course</b>	<b>Defined Expected SLOs</b>	<b>Defined Methods of Assessment</b>	<b>SLOs Assessed</b>	<b>Data Analyzed</b>	<b>Data used for improvement</b>	<b>SLOs Reassessed</b>
	PHT 020 Intro to Pharmacy Technology	X	X	FA07	X	Yes	SP08, SP11
	PHT 030 Pharmacology	X	X	SP08	X	Yes	FA08
	PHT 031 Pharmacy Calculations	X	X	FA10	X		
	PHT 041 Pharmacy Systems	X	X	SP11			
	PHT 042 Pharmacy Intern Seminar	X	X	FA07	X	Yes	SP08, F10
	PHT 043 Pharmacy Clinical Experience	X	X	FA07	X	Yes	SP08
<b>Totals</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>4</b>
	Certificate	X					
	A.S. Degree	X					

X = yes