**Academic Program Review: Self-Study**

***Instructions:*** *The following pages will guide your submission of your comprehensive self-study. Please type your responses directly into the document. The completed self-study instrument and all attachments must be submitted to the Academic Program Review Coordinator by September 1.*

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| **Program Under Review: Pharmacy Technician Certificate** |
| Degree(s): **N/A** |
| Certificate(s): **Pharmacy Technician** |
| Contact Information for lead on Self-Study: Name: **Jeremy Sasser**Campus: **SPC**Phone: **480-677-7787**Email: **Jeremy.sasser@centralaz.edu** |

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| **Program Mission** |
| What is the mission of the program: **The mission of the pharmacy technician program is to foster personal and professional growth of our students by providing them the proper balance between didactic and practical instruction that will prepare them for entry-level positions in various pharmacy settings**. |
| Describe how the program mission aligns with the College’s Mission:**Like the college, there is an emphasis on personal growth in addition to just gaining knowledge. We not only want our students to learn the material we teach, but also to become better citizens and engage their communities. We provide an opportunity for our students to attain an affordable education that will provide them the opportunity to have a successful career.** |
| What are the outcomes for the degree or certificate: **Our program has two major outcomes that it wants all of our students to accomplish. First, we want every student to successfully pass the Pharmacy Technician Certification Board’s national certification exam. This will provide our students with the best possible chance of meeting our second outcome: gainful employment. It is a goal that all of our graduates attain employment at pharmacy technicians in a diverse array of pharmacy settings, from retail, to hospitals and other inpatient facilities, to specialty pharmacies such as compounding and nuclear.** |
| Who is responsible for reviewing and updating the outcomes: **Jeremy Sasser/Janice Vermiglio-Smith** |

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| **Program Enrollment and Graduation Trends** |
| Summarize the program enrollment trends for the past 3 years: **Over the past 3 years, there has been nearly a 700% growth trend going from 5 students in 2009-2010 school year to 34 for the 2012-2013 school year.** |
| What factors are influencing enrollment trends: **With the down turn in the economy, I believe a lot of people are going back to school to change careers and many other students are looking for college programs that are affordable and short-term and can get them into the work force as soon as possible. The healthcare field, and pharmacy in particular, are very stable choices and according to the US Bureau of Labor Statistics, the pharmacy technician field is expected to grow at a rate of 25% through 2018, which is a much faster increase than the average for other careers.**  |
| How has the program typically recruited students: **Word of mouth, community outreach, career fairs, the CAC website, High School student outreach.** |
| Discuss the program graduation rate trends for the past 3 years: **The method used to calculate the program graduation rate is to look at enrollment in HPM164 (a class only offered to Pharmacy Technician students) and compare it to enrollment into HPM175H (the Pharmacy Technician Practicum). Please refer to Figure 1 at the end of this document for a yearly breakdown. Overall, the graduation rate from 2010-2012 is 59%. Out of a total of 54 students enrolled in the program, 32 have completed the program. There are a few potential explanations for this disparity. First, some students are completing the core classes, passing the certification exam, and getting a job in pharmacy and do not see the value in taking the externship. Second, an ideal situation would be one where a student goes all the way through the program, start to finish, in 1 year’s time, however, there are many students who are not taking the practicum until they have been in the program for over 1 year. This may be due the costs incurred in taking the practicum, and students who have not followed the program of study due to personal choice or possibly poor advising. A main goal of the program moving forward is to increase the graduation rate by increasing the amount of students that explicitly follow the program of study, improving the quality of education and the quality of the students going to externship. Lastly, a possible explanation for the large disparity between enrollment and graduation in 2012 may be due to more stringent requirements for students to enroll into the practicum.**  |

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| **Program Curriculum** |
| Discuss the strengths and weaknesses of the current program curriculum for each degree/certificate. Compare the CAC program to three other similar programs (ideally a program in Arizona, but out of state if necessary). **A big strength of the pharmacy technician curriculum is the flexibility of taking online, hybrid, and live classes. Many of our students have jobs outside of the classroom and having more flexibility with class availability greatly increases enrollment and retention.** **There are a few weaknesses, however. First, currently we only offer a certificate. A big curriculum change I would like to implement would be an option between either a certificate or Associate’s degree. Also, the pharmacy techniques class (HPM105) will transition from a hybrid class to a fully live class. As the name implies, this class must be heavily hands-on to provide our students the most opportunity to hone in on skills such as extemporaneous compounding, practicing sterile vial and ampule manipulation as outlined in the Unites States Pharmacopoeia Chapter <797> guidelines. Lastly, a big goal of the program is to become one of three accredited pharmacy technician programs in Arizona by the American Society of Health-System Pharmacists. In order to do so, strict curriculum guidelines set forth by the ASHP must be implemented. This would include increasing the number of practicum hours from 180 to 260. For a comparison of similar programs, please refer to chart at the end of this document.** |
| Discuss how the program gets feedback on its program and curriculum from external **sources, such** as advisory boards or employers.**The program has yearly advisory board meetings consisting of former students, current students, and Pharmacists, Pharmacy Technicians, and other supervisors from the facilities that we currently have affiliation agreements with. I also send out emails periodically to our partner sites to ensure our students are continuing to meet their ever-evolving needs and to get other feedback pertaining to improving the overall quality of our program.** |
| Discuss any external accreditations which the program has. Are there any available accreditations which the program does not have, but maybenefit from seeking? **Currently, our program is not accredited. There is only one national accrediting body for pharmacy technician programs, and that organization is the American Society of Health System Pharmacists (ASHP). Currently, I am personally a member and I am working toward our program meeting their strict guidelines so that we can become accredited in the future. This will hold the CAC pharmacy technician program to the highest industry standard and make CAC *THE* place to get an education for a career in the field of pharmacy technology.** |
| Discuss how the program meets current or future needs for the job market in the county or state of Arizona: **With the increasing population of aging individuals, there is currently and should remain a high demand for trained pharmacy technicians. Gone are the days when just anybody could get a job in a pharmacy. With the increase in responsibility and job roles of the pharmacy technician, so will the demand for formally trained, certified pharmacy technicians. More and more opportunities are becoming available for pharmacy technicians in specialty pharmacy fields such as compounding, nuclear, and specialty care pharmacies.** |
| If your degree is a transfer degree please answer the following question:Identify specific baccalaureate programs for which this program is intended for transfer to: **N/A** |

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| **Program Resources** |
| Discuss the adequacy of the financial and budgetary resources available to the program over the past 3 years: **I believe the budget for the program has been adequate. There are a few large ticket items that would be nice to have, especially when it comes to gaining accreditation from ASHP such as a vertical Laminar Flow Hood, hot plates, and accurate scales.**  |
| Discuss the adequacy of the human resources available to the program over the past 3 years: **Human resources have been lacking the program needs a full time position that is dedicated to this program. Currently the program is overseen by the division chair, 19 hr preceptor and adjuncts. As the program continues to grow and expand to other campuses, the lack of dedicated faculty will become a major problem with accreditation.** |
| Discuss the adequacy of the technological resources available to the program over the past 3 years: **Technological resources have been adequate. While our program incorporates pharmacy software usage into the program, the program itself is rather archaic. There isn’t much need for emphasis, in my opinion, for teaching pharmacy software because every pharmacy out there will use different programs that our students will have to learn during their externship and subsequent jobs. According to feedback I have received in the past, it is almost better that our students not be exposed to any form of pharmacy software so as to increase the ease of training from their perspective practicum site and/or job. Other technology available as far as instruction is concerned is adequate.** |
| Discuss the adequacy of the physical (building space, classrooms, labs, etc) resources available to the program over the past 3 years:**With the completion of construction at both the SMC and SPC, the classrooms will be more than adequate. It should be noted that even during the period of construction when offices weren’t available, the CAC community has been more than accommodating to meet the needs of this program and its students.** |
| Discuss the adequacy of the academic support resources available to the program and its students over the past 3 years: **Academic Support Resources have been adequate. Moving forward, it will be emphasized in classes specific to the Pharmacy Technician students that tutoring is always available, as well as to emphasize the utilization of office hours to obtain any additional help that may be needed.** |
| Discuss the adequacy of the student support resources available to the program and its students over the past 3 years: **Student support resources have been adequate.** **I do currently have a TRiO student in one of my classes. Upon review of the program, I feel it is an excellent program to help our students succeed.** |

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| **Program Effectiveness** |
| Describe how well degree program graduates achieve the college’s general education outcomes during the past 3 years: **N/A** |
| Describe how you measure the success of degree and certificate program graduates in achieving the program outcomes and how well students have achieved these outcomes during the past 3 years. **The pharmacy Technician program will measure its success by the number of students who do the following: 1. Complete the program; 2. Successfully pass the PTCB certification exam, and 3. Secure gainful employment in the field of pharmacy following matriculation from the program. Unfortunately, of the three outcomes above, only program completion has been tracked. Moving forward, the program will do its best to track the rate of certification and employment of our graduates.** |
| **If your degree is a transfer degree please answer the following questions:** |
| What percentage of the program enrollees transfer to a baccalaureate level institution? **N/A** |
| Describe the level of success programs students achieve at transfer institutions. **N/A** |
| Describe the success of students who do not transfer to baccalaureate level institution in obtaining a job in the field of study upon graduation: **N/A** |
| **If you degree or certificate leads directly in to the work place please answer the following questions:** |
| Describe the success of students in obtaining a job in the field of study upon graduation: **Up to this point, the program has not had the resources to track this. Moving forward, the program will try to obtain this data with the understanding the data is only as good as the feedback received from graduated students. It may be difficult to track students and their accomplishments after they complete the program.** |
| How many certificate completers continue their studies at CAC: **Up to this point, the program has not had the resources to track this. Moving forward, the program will try to obtain this data with the understanding the data is only as good as the feedback received from graduated students. It may be difficult to track students and their accomplishments after they complete the program.** |
| How many degree completers continue their studies another institution: **N/A** |

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| **Program Continuous Quality Improvement** |
| Discuss how the program has used learning outcome assessment results to improve instruction over the past 3 years: **N/A** |
| Discuss how the program has used operational planning goals to achieve quality improvement over the past 3 years: **The pharmacy technician preceptor had been vacant until I applied and received the position. I have only been in the position less than one year. Since I am 19 hours, the majority of my time is spent in teaching and advising for the program.**  |
| Describe other ways the program has engaged in continuous quality improvement: **The program continually seeks feedback from professionals in the pharmacy field. The program stays in constant contact with the facilities that we currently have an affiliation agreement with as well as other pharmacy professionals. Additionally, the program takes instructor assessments from students and other division personnel very seriously in an effort to continually improve instruction.**  |

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| **Program Alignment with Institutional Goals** |
| Describe how the program has directly or indirectly is helping the College achieve each of its current strategic goals. If you believe the goal is inapplicable to the program indicate so. |
| Strategic Goal 1: Ensure broad access to high-quality innovative educational programs, services and training opportunities for Pinal County residents: **The mission of the pharmacy technician program epitomizes this strategic goal. The program will strive to provide its students with the highest quality training ensuring that they will have everything they need to be successful in entry-level pharmacy positions.** |
| Strategic Goal 2: Improve student retention, persistence, completion and job placement: **By providing the highest quality training program, we will better serve the needs of our students and through persistence and helping as much as possible with hob placement, student retention rates should continue to improve.** |
| Strategic Goal 3: Ensure a safe, sustainable environment that promotes learning, communication, diversity and satisfaction among students, faculty and staff: **Learning and proper communication are at the core of ideals driving the pharmacy technician program. Additionally, diversity and cultural awareness will continue to be welcome in the program. By continuing to instruct within our mission in mind, we will settle for nothing less than complete satisfaction from our students, faculty, and staff.** |
| Strategic Goal 4: Enhance our physical and technological infrastructure to support changes in the learning and work environment: **N/A** |
| Strategic Goal 5: Expand partnerships with Universities to provide advanced degrees to Pinal County residents: **A goal in the future is to offer an AS degree for pharmacy technician so that some credits could transfer to a University or be used to fulfill prerequisite requirements for advanced degrees in pharmacy such as MS or PharmD degrees.**  |
| Strategic Goal 6: Obtain approval from the state and regional accreditation body to offer baccalaureate degrees at CAC: **N/A**  |
| Strategic Goal 7: Optimize fiscal resources that support the needs and expectations of students and the community: **One of the main goals of the program is to keep the program affordable so that our students need not worry about as much about how they will pay for school allowing them to be more successful in school and in their career.** |
| Strategic Goal 8: Contribute to the economic vitality, workforce development, and job training needs of Pinal County and surrounding region: **There will continue to be a need for allied healthcare workers, and the pharmacy technician program will contribute greatly to the community and the pharmacy technician profession by continuing to produce highly-trained, highly-qualified graduates to fulfill the needs of Pinal County and the surrounding regions.** |

**Curriculum Comparison Chart (Certificate)**

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| **Name of Certificate: Pharmacy Technician Certificate** |
| ***CAC*** | ***Carrington College*** | ***Pima Community College*** | ***Arizona College only accredited school*** |
| **MAT086 Pre-Algebra/Reading** |  | **Math 092 or pass assessment/ Reading 091 or pass assessment** |  |
| **CIS120 Survey of Computer Info Systems** | **Computer Literacy****Computer Software** | **Computer Applications for Pharmacy** | **Microcomputer Concepts and Keyboarding****Superscript Pharmacy Management Software** |
| **HCC 100 Intro to Health Care** |  |  |  |
| **HCC111 Health Care Law and Ethics** |  | **Pharmacy Law and Ethics** | **Laws, Ethics, and Professionalism** |
| **HCC112 Interpersonal Skills** | **Patient Communications** | **Communications****Interprofessional Relations in Pharmacy** |  |
| **HCC113 Math & Dosage Calculations** | **Pharmacy Math** | **Pharmaceutical Calculations** | **Pharmacy Calculations** |
| **HCC116 Medical Terminology** |  |  | **Medical Terminology** |
| **HPM105 Pharmacy Techniques** | **Aseptic Preparation Clerical Procedures/CPR Prescriptions****Patient Profiles****Drug Distribution****IV Preparation****Specialty Lab Equipment****Drug Reference Books** | **Sterile Products****Pharmacy Operations** | **Retail Pharmacy – Daily Practice****Retail Pharmacy – Inventory****Hospital Pharmacy Management****Procedures Hospital Pharmacy – Daily Practice****IV Basics****IV – TPN’s and Chemotherapy****Irrigations and Opthalmics****Superscript Pharmacy Management Software** |
| **HPM162 Basic Pharmacology for Health Occupations** | **Pharmacology Controlled Substances****Pharmacology of the Respiratory System****Pharmacology of the Nervous System****Pharmacology of the Digestive System****Antibiotics****Over the Counter Medications****Pharmacology of the Circulatory System****Psychopharmacology and Pharmacology of the Endocrine System****Chemotheraphy** | **Intro to Pharmacy Technology** **Drug Therapy I** **Clinical Seminar****Drug Therapy II** | **Cardiovascular System Digestive and Respiratory Systems****Central Nervous System****Herbals, Vitamins and Supplements****Anti-Infectives and Chemotherapy****Endocrine and Integumentary Systems** |
| **HPM164 Pharmacy Certification Review** |  | **Analysis & Critical Thinking** |  |
| **HPM173 Pathophysiology** |  |  |  |
| **BIO160 Intro to Anatomy & Physiology for Health Occupations** | **Chemistry** |  |  |
| **HPM175H Pharmacy Technician Practicum** | **Externship** **Resume and Professional Development** | **Pharmacy Technician Internship** | **Pharmacy Technician Externship** |
| **Total Credits: 36** | **Total Credits: 30** | **Total Credits: 36-42** | **Total Credits: 30** |

Figure 1

**\*For figure 1, HPM175H is used as an indicator of graduation rate. The program assumes that once a student gets into their practicum, they will more than likely finish the program. All other courses must be completed before taking HPM175H. HPM164 is used as an indicator for overall program enrollment as it is a pharmacy technician-only class.**