**Academic Program Review: Self-Study**

***Instructions:*** *The following pages will guide your submission of your academic program review 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 and your Academic Dean by September 1.*

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| **Program Under Review** |
| Degree(s): None |
| Certificate(s): Clinical Laboratory Assistant (currently in effect) |
| Contact Information for lead on Self-Study:  Name: Nancy Juarez  Campus: SPC  Phone: 520-494-5388  Email: nancy.juarez@centralaz.edu |

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| **Program Description, Vision and Outcomes** |
| 1. What is the description of the program as stated in the current CAC catalog: **The Clinical laboratory assistants perform phlebotomy, specimen processing, quality control, laboratory orientation and regulation under the supervision of physicians or laboratory scientists or technologists. They also perform point-of-care and waived laboratory tests and procedures with a limited amount of supervision and prepare specimens for transport if necessary.**   . |
| 1. Does your program have a mission and/or a vision statement**?** If it does, please write them below and indicate where they appear**. The Clinical Laboratory Assistant sponsored by Central Arizona College Health Careers is designed to provide educational experiences which prepare the students for a professional career in the health care system. The Clinical Laboratory Assistant is also designed to prepare students to be eligible for the national certification exam.** |
| 1. Describe how the program’s description, mission and/or vision aligns with the College’s Mission and Vision:   **CAC Vision and Mission Statements:**  *OUR VISION*  Central Arizona College is the leader of innovative learner  success and the center for educational opportunities in our  Diverse communities.  **Provides the opportunity for students to become gainfully employed in contributing to the economic vitality in Pinal County by providing a Certificate program for further advancement in education.**  *OUR MISSION*  Central Arizona College engages our diverse communities in  quality learning experiences for lifelong success by providing  accessible educational, economic, cultural, and personal  Growth opportunities.  **Provides the opportunity for students to further advance in their quality learning experience for a lifelong successful growth opportunities through the access educational choices provided by CAC.** |

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| **Program Enrollment and Graduation Trends** |
| 1. Summarize the program enrollment data for the past 5 years in the chart below:  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Degree/Certificate | 2016-17 | 2015-16 | 2014-15 | 2013-14 | 2012-13 | | Certificate | 20 | 19 | 17 | 14 | 14 | |  |  |  |  |  |  | |
| 1. Discuss and explain the factors influencing the enrollment trends: Employment market, advising in media, Word of mouth, networking. |
| 1. How has the program typically recruited students and marketed the program: Word of mouth and Networking |
| 1. Summarize the program graduation rate trends for the past 5 years in the chart below:  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Degree/Certificate | 2016-17 | 2015-16 | 2014-15 | 2013-14 | 2012-13 | | Certificate | 9 | 9 | 10 | 6 | 1 | |  |  |  |  |  |  | |
| 1. How many program enrollees or graduates studied at an in-state baccalaureate level institution during the past 5 years? Put the data in the table below.  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Degree/Certificate | 2016-17 | 2015-16 | 2014-15 | 2013-14 | 2012-13 | | Certificate | 1 | 0 | 0 | 0 | 0 | |  |  |  |  |  |  | |
| 1. Discuss and explain the graduation trends. What efforts has the program made to help students achieve completion?   **Graduation trends are due to student’s personal conflicts in staying connected. The CLA Program has stepped up in the advising portion of the program in making student’s aware of the tutoring and assistance they have available to them from the time they enter the program until completed.** |
| 1. Provide a summary of this section. Indicate trends observed in the data, identify areas of strengths, and areas for improvement**. Students taking on more than they can handle, Financial Aid assistance, Personal issues that occur in their life. The strengths that come from CLA is being able to do the advising and registering the students, in helping them meet their needs. Keeping the student on track, helping with questions they are not comprehending that seem confusing and giving them guidance on where to go and who to speak with for help. Meeting with the current student bi-weekly or monthly to council any needs of the student that are needing to be meant in keeping them focused.** |

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| **Program Curriculum:** *Submit a completed Curriculum Comparison Chart along with the self-study, comparing the CAC program curriculum to three similar programs, for each Degree and Certificate discussed in this self-study. Ideally compare to other Arizona programs, and out of state if necessary. Use the charts to answer the following questions.* |
| **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).**  Comparison of Programs (Certificate)  AC Maricopa Community College Pima Community Carrington College   |  |  |  |  | | --- | --- | --- | --- | | HCC 130 Fundamentals in Health Care Delivery | HCC 145 AA Medical Terminology for Health Care Professionals I | PHB 160 Foundations of Phlebotomy | AP 100 Basic Anatomy & Physiology | | PLB 109 Phlebotomy Basic Skills | PLB 110 Practicum Fundamental Phlebotomy Skills | PHB 162 Safety Standards in Phlebotomy | BCC Orientation to United States Health Care Practices | | PLB 111 Specimen Processing and advanced Techniques in Phlebotomy Procedures | LBA 150 Overview of Laboratory Assistant | PHB 164 Professional Practice in Phlebotomy | BCC 112 Medical Management Processes and Procedures & Codes | | LBA 152 Laboratory Assistant Principles and Procedures | LBA 158 Laboratory Assistant Practicum | PHB 166 LB Phlebotomy Laboratory Practice | BIO 14 Microbiology with Lab | |  |  | PHB 190 LL Clinical Internship Phlebotomy | PHL 10 Basic and Advanced Procedures in Phlebotomy with Lab | |  |  |  | PHL 100 Externship | |  |  |  |  | | Total Credits | 11-28 | 12-24 | 7-27 |   CAC and Maricopa both offer one certificate whereas Pima and Carrington offer just Phlebotomy certificates.  Central Arizona Community College, Maricopa Community College.  Both colleges require the same General Education Requirements that varies 7-28 credits.  At Central Arizona College (CAC) we have a prescribed program of study that all students seeking their certificate must follow the 27 credits.  At Maricopa Community College they are given two options to follow both include required Courses and depending which option they choose credits vary. Option I: 28 required course and 11 credits in restrictive Elective area. Option 2: 30 required courses and 8 credits in restrictive Elective area. Total credits are 63.  Pima Community College has 12 credits of core requirements and requires 12 credits of required electives for a total of 24 credits to earn their certificate.  CAC requires 27 total credit hours throughout the nine month program with holding an 80% employment placement right out of clinical rotations. |
| 1. Degree (s): After reviewing the Curriculum Comparison Chart of the other institutions for the degree(s), is insight given into courses that could be added, combined or deleted? **After reviewing other curriculum comparisons the certificate that is offered through CAC it gives the student an advancement of moving into a university setting with transferable credits for advancement.** |
| 1. When the Curriculum Review for each degree and certificate comes due, are there any course descriptions, articulation, additions, revisions or deletions anticipated? **Currently none at this time.** |

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| **Program Outcomes and Assessment** |
| 1. What are the student learning outcomes for the degree or certificate as currently indicated in ACRES: **This course defines the role of the clinical laboratory assistant in the healthcare delivery system: infection control principles, safety practices, procedures to collect specimens, methods for preparing blood and body fluid specimens for analysis, and the performance of basic tests at the clinical assistant level will be discussed. An overview of quality control protocols and potential pre-analytical errors will be provided. Prerequisites: Phlebotomy Certificate and Instructor consent.** |
| 1. Are the outcomes from your program determined or influenced by any external organization, agency, or accreditor? If so, please explain. Are there any available accreditations which the program does not have, but maybenefit from seeking? **Clinical Assistant is the term NAACLS uses to designate a formally prepared multi-skilled**   **Health care provider. The Clinical Assistant Competencies define the required**  **Skills with a laboratory focus. The Clinical Assistant Standards are used to evaluate**  **Educational programs for the Clinical Assistant. For information regarding the level of**  **laboratory testing appropriate for the Clinical Assistant, contact the Center for Disease**  **Control or the United States Health Care Financing Administration.**  **In accordance with its mission, NAACLS provides leadership in fostering innovative**  **Educational approaches and actively supporting cooperative efforts with other agencies.**  **NAACLS encourages employers to formalize training programs for the Clinical Assistant**  **Using this approval process. NAACLS also supports the addition of this approved**  **Clinical Assistant program to the competencies of other accredited health service program.** |
| 1. Describe the department/program strategies for determining how learning outcomes are assessed using direct and indirect methods and for collecting, analyzing and discussing findings. **The medical and health professions cooperate to establish, maintain and promote standards of quality for educational programs in the health professions and to provide**   **Recognition for such programs that meet or exceed the minimum Standards.**  **These Standards are used for the development and evaluation of clinical assistant programs.** |
| 1. Is a common assessment being conducted to assess the Measurable Student Learning Outcomes (MSLOs) for a common course? Is there data which indicates the degree to which students in the program are achieving the program’s MSLOs? **Role of the Clinical Laboratory Assistant**   **Common medical laboratory terminology**  **Describe the difference between whole blood, serum, and plasma**  **Phlebotomy and preparing samples for analysis or rejection/recollection**  **Prepare reagents, standards, and controls**  **Quality control protocols, maintenance and calibration of instrumentation**  **Use information systems in clinical laboratory**  **Potential pre-analytical errors**  **Appropriateness of tests at the laboratory assistant level**  **Describe infection control and safety practices**  **Effective and appropriate communication with peers**  **Recognize and understand test reference ranges.** |
| 1. Is there data which indicates the degree to which students in the program are achieving the program’s Common Student Learning Outcomes (CSLOs)? Please share and explain the data.   1. Cultural and Civic Engagement  Participate in diverse environments while demonstrating global citizenship and social consciousness  **a. define the role of the clinical assistant in the healthcare delivery system.**  **b) Use common medical terminology.**  **c) Demonstrate knowledge of infection control and safety practices.**  **d) Follow standard operating procedures to collect specimens.**  **e) prepare blood and body fluid specimens for analysis according to standard operating**  **Procedures.**  **f) prepare/reconstitute reagents, standards and controls according to standard**  **Operating procedure.**  **g) perform appropriate tests at the clinical assistant level, according to standard**  **Operating procedures.**  **h) Perform and record vital sign measurements.**  **i) Follow established quality control protocols.**  **j) communicate (verbally and non-verbally) effectively and appropriately in the**  **workplace.**  **k) Use information systems necessary to accomplish job functions.**  **l) identify and report potential pre-analytical errors that may occur during specimen**  **collection, labeling, transporting and processing**  2. Integrative Knowledge  Identify, comprehend, apply and synthesize facts, concepts, theories and practices across broad and specialized knowledge areas  **a. define the role of the clinical assistant in the healthcare delivery system.**  **b) Use common medical terminology.**  **c) Demonstrate knowledge of infection control and safety practices.**  **d) Follow standard operating procedures to collect specimens.**  **e) prepare blood and body fluid specimens for analysis according to standard operating**  **Procedures.**  **f) prepare/reconstitute reagents, standards and controls according to standard**  **operating procedure.**  **g) perform appropriate tests at the clinical assistant level, according to standard**  **operating procedures.**  **h) Perform and record vital sign measurements.**  **i) Follow established quality control protocols.**  **j) communicate (verbally and non-verbally) effectively and appropriately in the**  **workplace.**  **k) Use information systems necessary to accomplish job functions.**  **l) identify and report potential pre-analytical errors that may occur during specimen**  **collection, labeling, transporting and processing**  3. Personal and Professional Skills  Demonstrate skills which enhance personal and professional development  **a. define the role of the clinical assistant in the healthcare delivery system.**  **b) Use common medical terminology.**  **c) Demonstrate knowledge of infection control and safety practices.**  **d) Follow standard operating procedures to collect specimens.**  **e) prepare blood and body fluid specimens for analysis according to standard operating**  **Procedures.**  **f) prepare/reconstitute reagents, standards and controls according to standard**  **Operating procedure.**  **g) perform appropriate tests at the clinical assistant level, according to standard**  **operating procedures.**  **h) Perform and record vital sign measurements.**  **i) Follow established quality control protocols.**  **j) communicate (verbally and non-verbally) effectively and appropriately in the**  **workplace.**  **k) Use information systems necessary to accomplish job functions.**  **l) identify and report potential pre-analytical errors that may occur during specimen**  **collection, labeling, transporting and processing**  4. Reasoning Skills  Inquire and analyze to solve problems, draw logical conclusions, or create innovative ideas  **a. define the role of the clinical assistant in the healthcare delivery system.**  **b) Use common medical terminology.**  **c) Demonstrate knowledge of infection control and safety practices.**  **d) Follow standard operating procedures to collect specimens.**  **e) prepare blood and body fluid specimens for analysis according to standard operating**  **procedures.**  **f) prepare/reconstitute reagents, standards and controls according to standard**  **operating procedure.**  **g) perform appropriate tests at the clinical assistant level, according to standard**  **operating procedures.**  **h) Perform and record vital sign measurements.**  **i) Follow established quality control protocols.**  **j) communicate (verbally and non-verbally) effectively and appropriately in the**  **workplace.**  **k) Use information systems necessary to accomplish job functions.**  **l) identify and report potential pre-analytical errors that may occur during specimen**  **collection, labeling, transporting and processing** |
| 1. Discuss how the program has used MSLO and CSLO assessment results to improve instruction and/or student learning over the past 5 years. Summarize actions taken based on assessment of student learning findings. **The use of Medical Terminology has proven to be substantial in the understanding of how the medical field works in using the abbreviations for testing and diagnoses. Infection Control plays an important role in teaching the student and helping them understand the importance of Personal Protective Equipment that keeps them save as well as the patient. Integrity of the specimens that the student collects in obtaining non-contaminated samples. Understanding the standard operating procedures in the handling of every specimen that enters a laboratory setting. The quality control and quality assurance in preparing the instrumentation that the testing of the sample will be performed on. Communication being important either verbally or non-verbally and the effects that it can have on patient and student safety. Pre-analytical errors that can be caused by improper collection, labeling or transporting.** |
| 1. Discuss how the program supports current or future needs for the job market in Pinal County, the state of Arizona, and/or the United States. **The Clinical Laboratory Assistant Program has meant the current and future needs of Pinal County along with the state of Arizona and the United States by: students that are in clinical rotations have an 80% hiring rate within Pinal County alone. In the state of Arizona there is 20% hiring rate and within the United States from students that attended and graduated CAC there is 15% of employment reached.** |
| 1. For degree programs, identify any specific in-state baccalaureate programs into which this program is particularly suited for transfer. **Medical laboratory scientist (MLS), also traditionally referred to as a Medical technologist (MT), or a Clinical laboratory scientist (CLS), is a healthcare professional who performs chemical, hematological, immunologic, histopathological, cyto-pathological, microscopic, and bacteriological diagnostic analyses on body fluids such as blood.** |
| 1. Indicate if there are any articulation agreements in place for degree graduates. **The HCC courses required for the Clinical Laboratory Assistant Certificate are transferable to NAU, ASU, and The University of Arizona to move onto an MLS.** |
| 1. Discuss how the program gets feedback on its program and curriculum from external sources, suchas advisory boards, employers, articulation task forces, accreditors, etc. **We have an advisory board that meets annually, in obtaining feedback from all practicum site supervisors who give us written input on improving the program.** |

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| **Program Specific Resources:**  *In this section please focus on program specific resource. You may, but do not have to, discuss resources available to the college at large such as Blackboard, the Learning Centers, Library, etc. However, if these resources are impacting your program in a positive or negative way which you would like to discuss, please do so.* |
| 1. Discuss the adequacy of the budgetary resources, human resources, technological resources, classrooms, labs and space, academic support for students (i.e.: learning center, library) and student support (i.e.: advising) available to the program over the past 5 years: **The program Director advises the students entering the Clinical Laboratory Assistant Program from beginning to the end in helping with academic support, Capital Budget has provided equipment for testing Point of Care Procedures, the Clinical Laboratory Assistant class has moved into a science room upstairs in T205 & T207 building with more space and area for testing procedures along with two hoods and an extended laboratory room with another hood for set up with laboratory equipment purchased from capital budget. Yearly budget provides each semester with required materials used in the classroom setting in preparing the students for clinical rotations. Students are made aware of the library and tutoring services available to them.** |
| 1. What future goals does the program have? Will extra resources and funding be required to achieve it**? Future goals for the Clinical Laboratory Assistant Program include looking at opening a laboratory setting at the Casa Grande Center facility and utilizing CAC students in obtaining practicum experience in running a draw station in collection of blood samples, running test samples on the equipment purchased for the program that is already active. Including HIM students in registering patients for their practicum experience as well. Opening other doors for other Health Career departments with CAC and utilizing our students and staff in reaching out to the community with professional customer service. Yes extra resources and funding will be required to achieve this goal.** |

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| **Program Effectiveness for Graduates** |
| 1. Describe how you measure the success of degree and certificate program graduates. For example, are graduate surveys conducted? Are surveys given to employers to determine satisfaction with program graduate employees? **The measure of success for graduates is measured through my clinical exchange with evaluations from the students on their clinical site along with evaluations from the facility the student attended on that student’s performance. This program is adopted by the clinical sites and required by the student to pay a $35 dollar fee with orientation and exams about that particular site the student is attending. Upon completion the site through my clinical exchange is sent a website for the evaluation of the student and the student is also sent a website for evaluation of their clinical site.** |
| 1. If a degree or certificate is designed to lead directly into the workforce, describe the success of students in obtaining a job in the field of study upon graduation. Please provide any qualitative or quantitative data you have**: The CAC certificate is acceptable for any workforce that students obtain a job in the field of study in Clinical Laboratory Assistant. Becoming National Certified is the student’s choice for furthering their ability for higher pay.** |
| 1. If your program serves to prepare a student for external certification or licensure of any kind identify the certification or license and the percentage of program graduates who earn/achieve it. Put data in the table below.  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Licensure/Certification | 2016-17 | 2015-16 | 2014-15 | 2013-14 | 2012-13 | | American Medical Technologist National Certification (CLA) | 7 | 5 | 3 | 3 | 2 | |  |  |  |  |  |  | |

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| **Program Continuous Quality Improvement** |
| Discuss how the program has used operational planning goals to achieve quality improvement over the past 5 years:  **a. Continue to contact all prior Phlebotomy Students from the past 4 years that didn’t complete program to return to finish.**  **b. Work with Marketing to feature the CLA program in the news media.**  **c. Hold 1 information sessions in Spring Semester**  **d. Reach high schools and meet with the instructors of their facilities to obtain interested students into the CLA Program**  **e. Bring on board the CAG Program for dislocated workers, through Department of Economic Security Program.**  **f. Determine new classroom for CLA equipment space.** |
| 1. Describe other ways the program has engaged in continuous quality improvement: **Implemented the Clinical Laboratory Assistant Classes into Black Board 2018. Implemented lab tops into the classroom teaching style for continuing education learning in 2017. Still continuing reviewing our program for the demands of the community in implementing changes in the highest level of student success.** |

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| **Program Alignment with Institutional Strategic Goals:** |
| 1.Describe how the program has directly or indirectly is helping the College achieve its current strategic goals.  ***CAC Strategic Goals:***   1. Ensure broad access to high-quality innovative educational programs, services and training opportunities for Pinal County residents. **Online classes are offered for required courses in the CLA program, it is taught at SPC campus at the times to accommodate the students.** 2. Improve student retention, persistence, completion and job placement. **Students entering the CLA program**   **follow the program of study to completeness. With the application process we are able to assist students in**  **completing their goals and prepare students for the workplace.**   1. Ensure a safe, sustainable environment that promotes learning, communication, diversity and satisfaction among students, faculty and staff. **It is discussed with all involved program requirements safety issues respect**   **For one another.**   1. Enhance our physical and technological infrastructure to support changes in the learning and work environment   **The move to a larger room with more space and electronic outlets that is becoming national standard in the**  **Class room setting has made a big impact on student retention**.   1. Expand partnerships with Universities to provide advanced degrees to Pinal County residents. **N/A** 2. Obtain approval from the state and regional accreditation body to offer baccalaureate degrees at CAC. **N/A** 3. Optimize fiscal resources that support the needs and expectations of students and the community   Contribute to the economic vitality, workforce development, and job training needs of Pinal County and surrounding region. **Inventory process now in place allows us to track supplies and replace as necessary without duplication.** |

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| **Evaluation of Program Strengths, Viability and Areas for Improvement:** |
| After completing the APR Self Study, identify areas of strength and areas for improvement in the program. Is the program still a viable program? Discuss the next steps for the program and possible Action Plan Ideas.   1. **To help strengthen the Clinical Laboratory Assistant Program having a Full Time Faculty staff would bring a consistent pathway between faculty and student for the program’s growth. Many hours are needed in helping with the growth of a program, in doing this would open up other campuses with the availability of CLA taught at them as well. The CLA program has shown continual growth within the five years in which it has been implemented at CAC with students that attended 10-13 years just for Phlebotomy returning to continue their education into the CLA program.** 2. **The Pinal county community has a high percentage rate of employed students that have graduated from CAC through the Clinical Laboratory Assistant Program. In meeting the needs of the community and surrounding areas, the CLA program is still a viable program to offer at Central Arizona College in meeting students’ needs along with the community it serves.** 3. **Future goals for the Clinical Laboratory Assistant Program include looking at opening a laboratory setting at the Casa Grande Center facility and utilizing CAC students in obtaining practicum experience in running a draw station in collection of blood samples, running test samples on the equipment purchased for the program that is already active. Including HIM students in registering patients for their practicum experience as well. Opening other doors for other Health Career departments with CAC and utilizing our students and staff in reaching out to the community with professional customer service.** |