Annual Report for Assessment of Outcomes 2012-13

Subject Area Committee Name: *Veterinary Technology*
Contact person: *Brad Krohn DVM, VT Program Department Chair*
For CTE: Degree or certificate* assessed: *A.A.S. Veterinary Technology*
*please attach a table showing the alignment of the degree or certificate outcomes with the College Core Outcomes

Please address the questions below and
send to *learningassessment@pcc.edu* by **June 21, 2013** with Annual Report in the subject line

1. Describe changes that have been implemented towards improving students' attainment of outcomes that resulted from recent outcome assessments. These may include but are not limited to changes to content, materials, instruction, pedagogy etc. Please be sure to **describe the connection** between the assessment results and the changes made.

The VT SAC has chosen to review four of its seven Degree Outcomes for this annual report. Please see the attached table for a description of VT degree outcome alignment to PCC core outcomes (***Appendix A***). Assessment of these outcomes during 2012-2013 did not indicate any areas where second-year program students or graduates failed to meet the goals of the Veterinary Technology program or college. Graduate performance on the Veterinary Technicians National Licensing Exam (VTNE) is assessed closely each year by the program SAC and this performance is considered the benchmark of outcome assessment by the program's accreditor The American Veterinary Medical Association (AVMA). The VTNE examination is subdivided into seven specific subject area sections that reflect the course structure of our curriculum. In July of 2012 all (100%) of the program's 29 graduates passed the VTNE examination on their first attempt. The national average pass rate was 74% for this examination. The PCC student pass rate on the VTNE continues to be outstanding year after year and well-above the national average scores in all subsections of the examination.

Review of the scores on individual subsections of the VTNE exam revealed that the subject area of Radiography is consistently the most difficult subject for all test takers nationwide. PCC student performance was above the national average in the area of Radiography but was also revealed as the lowest scoring area of the exam for our students. This scoring trend was discussed in VT program SAC meetings and it was agreed that renewed focus on the VT204 Veterinary Radiography curriculum would be prudent. Improvements made to this area of curriculum during 2012-2013 included identification and purchase of a state-of-the art digital dental radiography machine and a new edition of the VT204 textbook. The other significant improvements included the addition of guest speakers including a veterinarian that

specializes in radiography (Dr. John Feleciano, owner of Portland's Veterinary Diagnostic Imaging and Cytology specialty practice), and the addition of a hands-on laboratory dedicated solely to dental radiography. This laboratory included guest lecturer Lisa Davis- a CVT who specializes in veterinary dentistry and dental radiography. The SAC anticipates improved scores in the radiography subsection of the VTNE for the class of 2013.

2., 3., 4. The VT program SAC chose to assess four of its seven degree outcomes in 2012-2013.

- *Be prepared to take the National Veterinary Technician Board Examination (VTNE)*

- *Function as competent entry level certified veterinary technicians in their chosen area of veterinary medicine, whether it is veterinary practice, research, laboratory, or industry.*

- *Communicate effectively (written and orally), work together with other individuals, and be reliable and responsible as effective members of the animal healthcare team in their chosen area of veterinary medicine.*

- *Think, calculate, and make decisions allowed them by the Veterinary Practice Act of the state in which they are employed.*

In regards to assessment design, the first two outcomes listed above where assessed by reviewing program graduate scores on the VTNE licensing examination. The sample size included all members of the graduating class of 2012. The VTNE examination is owned and administered by the American Association of Veterinary State Boards. The VTNE's stated purpose is "*to evaluate entry-level veterinary technician competency to practice and to be credentialed."* The computer-based exam is constantly updated, reviewed and reevaluated by highly-qualified item writers so that it remains a valid tool. Official results of the examination are provided directly to the VT program Department Chair/SAC Chair. The data provided includes pass/fail data for each individual PCC graduate, average PCC graduate performance on each subsection of the exam, and average overall performance of PCC graduates on the examination. Importantly, the data also includes the same information for all test takers nationwide. This allows immediate and direct comparison of PCC graduate performance to graduates of other accredited veterinary technology programs. PCC graduates score above the national average in all subsections of this examination year after year providing direct evidence of their success. This assessment tool does not currently need revision. For a summary of the most recent VTNE examination data see ***Appendix B***.

The third listed outcome *(Communicate effectively…)* was assessed via individual student performance on a capstone written/oral/powerpoint presentation project. This project is the student's contribution to the Veterinary Technology Student Seminar Series (VT203) which has become a defining element of the veterinary technology student experience. The clear expectation for this presentation is for the student to perform at a level that would be acceptable for a presenter at a professional continuing education event. Students are required to work in pairs for this project and a standardized rubric is used by the course instructor to evaluate student performance *(see **Appendix C**)*. Performance of all graduates of the classes of 2012 (n = 29) and 2013 (n = 26) where assessed. All program students earned passing grades on this project and where evaluated by the same instructor. The quality of each individual presentation has also been perceived as well above average by all visiting program faculty in attendance. Student performance on this important team-oriented communication project has been excellent and this assessment tool does not currently need revision.

The fourth listed outcome *(Think, calculate, and make decisions…)* was assessed via faculty supervision of each student's completion of the hands-on task of assessing and responding to changes in patient cardiopulmonary status during the delivery of general anesthesia. This was a task performed in a laboratory setting using live animal patients and direct hands-on student experience. All second-year program students were assessed in 2012-2013 and all students completed the task successfully. A checklist of standardized criteria for assessing successful completion of this task was used by the instructor directly supervising the student anesthetist. The checklist (rubric) used has been evaluated and approved by our accreditor the American Veterinary Medical Association *(see **Appendix D**).* This assessment tool does not currently need revision.

5. The effectiveness of using standardized criteria checklists for assessing student completion of skills deemed *essential* by our AVMA accreditor cannot be over-stated. The future of veterinary technology student assessment will largely involve the observation of individual student completion of these essential skills by faculty using the checklist for each skill and documenting the skill's completion. The VT program SAC is currently creating standardized criteria checklists for all AVMA "essential skills" and plans to provide all incoming students with a binder of the checklists and require all tasks to be completed, witnessed, and signed by the appropriate program faculty member as the student matriculates. It is agreed among the VT program SAC, the professional community of veterinary technology educators, and the American Veterinary Medical Association that this documentation process will be central to the future assessment of veterinary technology students.

Appendix A

VT A.A.S Degree Outcome	PCC Core Outcome
Communicate effectively (written and orally), work together with other individuals, and be reliable and responsible as effective members of the animal healthcare team in their chosen area of veterinary medicine.	CO 1 - Communication
Employ an awareness of their responsibility as a member of the animal healthcare industry in the prevention of disease in both humans and animals, as advocates for animals and their health, and in the education of the public regarding animal health care issues.	CO 2 - Community and Environmental Responsibility
Think, calculate, and make decisions allowed them by the Veterinary Practice Act of the state in which they are employed.	CO 3 - Critical Thinking
Recognize that the individuals they interact with on a daily basis, whether it is a coworker, employer, or client has uniquely individual needs and behaviors based upon their backgrounds and perspectives on life.	CO 4 - Cultural Awareness
Be prepared to take the National Veterinary Technician Board Examination (VTNE) Function as competent entry level certified veterinary technicians in their chosen area of veterinary medicine, whether it is veterinary practice, research, laboratory, or industry.	CO 5 - Professional Competence
Understand that they are life-long learners, and continuing education is fundamental to their ability to remain current with advances in veterinary medicine and related technologies.	CO 6 - Self Reflection

Appendix B

2012 National Veterinary Technician Board Exam Summary (NVTE)

	US/Canada Avg	**PCC**
Total All Areas	61.66%	73.88%
Radiography	53.03	65.84
Pharmacy/Pharmacology	66.59	80.54
Laboratory	65.74	75.05
Animal Care/Nursing	58.60	72.63
Anesthesiology	59.58	72.01
Dentistry	62.03	69.10
Surgery	65.05	76.99

- PCC graduates had a 100% pass-rate on the overall examination which included all graduates of last year's graduating class, and one repeat test-taker
- 74% pass rate is the national average for first-time test takers, with 36% pass-rate for repeat test-takers

Appendix C

SEMINAR PRESENTATION & TERM PAPER GRADING SHEET

STUDENT NAME:_____

I. ORGANIZATIONAL OUTLINE

Content	**(0-2 pts.)**	_____
Style	**(0-1 pts.)**	_____

II. ORAL PRESENTATION:

Time: (20 minutes: maximum 5, minimum 1)	_____
Follows Outline (excellent=2, satisfactory=1, needs improvement=0)	_____
Audibility (hear well=2, barely hear =1, couldn't hear=0)	_____
Clarity (understandable=1, not=0)	_____
Visual Aids (excellent=2, satisfactory=1, needs improvement=0)	_____
Speech Delivery (spoke=2, both=1, read notes=0)	_____
Overall Impression of Speech (maximum=8, minimum 1)	_____
Total (max 22)	_____

III. TERM PAPER:

Correct Style: (correct=2, partially=1, incorrect=0)	_____
Punctuation (good=2, average=1, poor=0)	_____
Grammar & Spelling: (good=2, average=1, poor=0)	_____
Readability: (easy to read=2, average=1, poor=0)	_____
Content: (maximum=8, minimum 1)	_____
Bibliography: (excellent=2, satisfactory=1, needs improvement=0)	_____
Total: (max 18)	_____

Appendix D

Maintenance and Monitoring of General Anesthesia – Small Animal

Date completed _____

- The student set the oxygen flow rate according to the patient's weight and requirement based on the breathing system
- The student adjusted the vaporizer setting to 15-3% based on the patient's response to the induction agent
- The student verified that the patient was breathing and recorded a heart rate before proceeding further to ensure the patient was stable following induction and intubation
- The student placed an esophageal stethoscope into the esophagus (if monitoring during a surgical procedure) and secured it to the endotracheal tube (not mouth) in order to facilitate quick removal if an emergency arose
- The student attached the ECG (or appropriate alternative) according to the practice standard operating procedure
- The student attached intravenous fluids to the catheter and set the rate for surgical maintenance as ordered by the veterinarian
- The student manually squeezed the rebreathing bag every 1-2 minutes regardless of the patient's respiratory rate to 15-20 cm H_20
- The student recorded values including heart rate, respiratory rate, anesthetic gas concentration and fluid volume administered (as well as any other parameters being monitored) on the anesthesia record every 5 minutes (every 30 minutes for fluids) The student brought abnormal readings to the attention of the veterinarian
- The student checked the patient's reflexes (palpebral, pedal, jawtone, eye position, depending on accessibility) to ensure the patient was neither too deep nor too light, and brought abnormal responses to the attention of the veterinarian
- The student observed the patient's respiratory function by observing the rebreathing bag to count rate and observing chest excursions to ensure adequate depth of each breath
- The student maintained the anesthetic gas concentration at the lowest level possible to achieve general anesthesia
- The student decreased the anesthetic concentration near the end of the procedure

Supervisor Name _____ RVT / DVM

Signature of Supervisor _____