

Vet Nursing PUR Self Study 2022-23

Veterinary Nursing:

Date: 09-15-2023

- Veterinary Nursing 2022-23 PUR Self-Study

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Veterinary Nursing

1.A. Program or Unit Description

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Briefly describe (1 paragraph) the program/unit, including but not limited to the following: academic division that the program/unit belongs to, the academic area(s) represented, degrees/certificates offered, average student enrollment, number of full-time faculty, type of curriculum or pedagogical approaches, and any other pertinent aspect of the program/unit.

The Veterinary Technician Program at Truckee Meadows Community College officially changed its name to the Veterinary Nursing Program in Spring 2020. The program was initiated after an assessment of the veterinary community in 2002 where a demand for licensed veterinary technicians (LVTs) was evident. The Veterinary Technician Program was granted provisional accreditation in September of 2005 by the American Veterinary Medical Association – Committee on Veterinary Technician Education and Activities (AVMA-CVTEA). The program addressed the critical and major recommendations as described in the first report and was granted full accreditation in November 2006.

The first class of students (a total of twelve) completed the Veterinary Technician Program in the spring of 2005. Students in the first two classes (Class of 2005 and Class of 2006) attended instruction in the evenings. In the fall of 2005, the students of the incoming class (Class of 2007) started to attend day instruction and could pursue the Certificate of Achievement or the AAS degree. It was with this class that applicants to the program were required to complete prerequisites. At the time, the program required BIOL 190 with lab (cellular biology) and another upper level biology class (such as BIOL 201 – zoology) as prerequisites. The second biology class has since been dropped as a prerequisite due to a system wide review of program credits and now only BIOL 190 (lecture and lab) is a prerequisite. The other two prerequisites for the program are ENG 101 and MATH 120 or higher. Because of a requirement change to take the Veterinary Technician National Exam (VTNE) which requires that a student have an Associate of Applied Science degree, the Certificate of Achievement was discontinued a number of years ago. The current AAS degree requires twenty-two general education credits.

In the fall of 2005, classes for the program were moved from the main campus of TMCC to a newly built satellite location, the Redfield facility. The Redfield site was home to the program for fifteen years until the spring of 2020. The Veterinary Nursing Program moved to its new home, the Meadowood campus North building. The program has a lecture classroom, a laboratory classroom, and for the first time, our own clinical space which includes a reception area, exam room, radiology room, animal holding area, large treatment area, and surgery room.

The program has two decades of successful classes! Almost all of the graduates have passed their Veterinary Technician National Examination and all have passed the State of Nevada exam (a take home exam regarding laws). Currently the three-year average VTNE pass rate is greater than 90%.

The Veterinary Nursing Program is in the Life Sciences, Allied Health and Public Safety Division of the college. There are two full-time faculty members (a DVM and an LVT), and the program has a strong, committed part-time faculty comprised of veterinarians and veterinary technicians (vet nurses). The program had been competitive with admission until this past summer (2022), and traditionally sixteen students were accepted to the program annually. With the new facility, we had planned on increasing the yearly enrollment to twenty students; however, it has been challenging to generate interest in a full time in-person academic program post-Covid. We currently have nineteen second year students and fourteen first year students (in addition we have part time students).

Of note, this fall semester we started a new class of students in the Veterinary Assistant Program. There are sixteen students in this two semester (six credits each semester), Skills Certificate program. This Program Unit Review is focusing on our long standing Veterinary Nursing Program but there may be a reference to

the new program.

1.B. Program or Unit Mission

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State the department's or unit's mission. Describe how it aligns to the College's Mission, and how program learning outcomes (PLOs) for degrees and certificates offered, or for the unit, align to the department/unit mission. If your department or unit does not currently have a mission statement, please discuss among your colleagues and develop one.

The mission statement for the Veterinary Nursing Program is to provide the highest quality and most advanced level of education in the field of veterinary technology. Because the animals we are able to help in the program primarily come from dog rescues, and the majority of practices in the area are for companion animals, the primary focus of the program is companion animal. We have a partnership with the research community in the greater Reno area in Charles River Laboratories and the University of Nevada, Reno, so our students gain knowledge in laboratory animal medicine. Comstock Equine Hospital and other area large animal facilities have been very generous in their support of the students by allowing for educational opportunities. Nevada is traditionally an agricultural state focusing on the livestock industry. There are off-site locations for educational experiences with food-producing animals, and the program works closely with the Nevada Department of Agriculture.

The mission of the Veterinary Nursing Program aligns with the College's mission by providing accessible, innovative educational opportunities. The objectives of the program are as follows:

1. To provide each individual student with the basic knowledge leading them to qualify for the State and National Veterinary Technician Exams.
2. To educate students on the responsibilities of a Licensed Veterinary Technician.
3. To develop students who value the field of veterinary medicine and therefore continue to educate themselves through formal and informal programs.
4. To increase the standard of veterinary medicine in our community by increasing the number of Licensed Veterinary Technicians.

The outcomes of the program are as follows:

1. Use oral and written medical communication.
2. Demonstrate knowledge of common animal anatomy, physiology, and pathology.
3. Anticipate and provide basic patient care and comfort.

4. Perform all duties and functions of a Licensed Veterinary Technician.

1.C. Program Learning Outcomes

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Program Learning Outcomes (PSLOs or PLOs)
Veterinary Nursing
PSLO
Skills Certificate, Veterinary Assistant
PSLO1: Perform common tasks relating to the office/reception area of the veterinary hospital including client communication, appointment scheduling, and paperwork relating to admission and discharge of patients (Active from Fall 2022)
PSLO 2: Understand the roles and responsibilities of the veterinary health team including professional conduct and recognize common legal concerns (Active from Fall 2022)
PSLO 3: Recognize and explain proper response to veterinary medical emergencies (Active from Fall 2022)
PSLO4: Explain the process of euthanasia, post mortem care, and understand the animal bond and grief (Active from Fall 2022)
PSLO5: Utilize basic medical terminology and abbreviations and demonstrate a basic understanding of small animal anatomy (Active from Fall 2022)
PSLO6: Explain common diseases and medical conditions and learn basic veterinary procedures including vaccination (Active from Fall 2022)
PSLO7: Identify common animal behaviors and animal breeds and demonstrate common restraint methods and tools relating to these animals (Active from Fall 2022)
PSLO8: Understand small animal nutritional requirements and animal diets (Active from Fall 2022)
PSLO9: Explain and demonstrate basic sanitation practices of a veterinary facility including isolation procedures, OSHA safety standards, and recognition of zoonotic concerns (Active from Fall 2022)
PSLO10: Demonstrate basic husbandry techniques including grooming (Active from Fall 2022)
PSLO11: Explain and perform common veterinary nursing duties appropriate for the veterinary assistant (Active from Fall 2022)
PSLO12: Assist in performing surgical preparations and understand surgical nursing including identification of common instruments and proper care and sterilization procedures (Active from Fall 2022)
PSLO13: Explain and assist with monitoring of recovering surgical patients and understand post-operative end of day routines (Active from Fall 2022)
PSLO14: Explain and demonstrate restraint, preparation, and positioning of patients for diagnostic imaging and handling of the radiographic record (Active from Fall 2022)
PSLO15: Explain and demonstrate collection and preparation of various biological samples for laboratory analysis (Active from Fall 2022)
Associate of Applied Science Veterinary Nursing
PSLO1: Demonstrate a solid understanding of the knowledge needed within the field, including anatomy and physiology, laboratory procedures, medical and surgical nursing skills, and an understanding of a variety of species, including companion animals. (Active from Fall 2010)
PSLO2: Demonstrate competency in all essential job skills as outlined by the American Veterinary Medical Association (AVMA) Committee on Veterinary Technician Education and Activities (CVTEA), including pharmacology, surgical nursing, dentistry, clinical laboratory, animal nursing, diagnostic imaging, and anesthesiology. (Active from Fall 2010)

Program Learning Outcomes (PSLOs or PLOs)

2.A. Progress on Previous Findings and Recommendations

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Describe your progress on the major findings and recommendations for the program/unit from the last PUR, any annual progress reports (APRs), and if applicable, external reviews, (e.g. advisory boards, articulation committees, and program accreditors).

- **Which findings and recommendations have the program/unit addressed?**
- **Which have yet to be accomplished? Which are no longer relevant, and why?**
- **Has the program/unit undergone any major changes as a result or that would impact the findings and recommendations since the last PUR?**

The Veterinary Nursing Program has full accreditation status from the AVMA-CVTEA. Our last site visit was on February 3rd and 4th of 2021. After this accreditation visit, there were four critical deficiencies noted. They were:

1. Documentation be provided that the advisory committee has representation and participation from multiple veterinarians to provide sufficient professional diversity in advising the Program.
2. Controlled substance storage be more secure and compliant with Drug Enforcement Administration (DEA) regulations.
3. Evidence exist that the institutional animal care and use committee (IACUC) is submitting semiannual reporting to the Institutional Official.
4. Students complete all required skills on live animals.

There was a major deficiency which was: Knowledge of library use and development of information retrieval skills be better emphasized in the curriculum of the Program.

Since the accreditation visit, the critical deficiencies and the major deficiency have been addressed and the program does not have any outstanding issues.

The previous Program Unit Review for the Veterinary Technician Program (now Veterinary Nursing) was completed in 2016-2017. The Committee strategies and recommendations from the PUR were as follows:

Curriculum:

- Continue to explore the opportunity to start a veterinary assistant program, including a needs assessment of Veterinary Assistants in the Reno/Sparks area, including faculty and facilities needs.
- Establish a course assessment schedule that addresses courses more frequently and consistently.
- Document more specific evidence of how assessment results are used to improve teaching and learning.
- Explore the possibility of more flexible class times to allow for full-time employment while pursuing a vet tech degree and giving students an option to have hands on experience rather than opting for an online degree.

Demographics and Enrollment:

- Expand the recruitment activities to include STEM and workforce development fairs, while marketing the program to males, minorities, students in online programs, and high school students.
- Given the time it takes students to complete the program, drops in retention from semester to semester, high numbers of students who drop out for academic reasons, and the program's goal of recruiting students who are most likely to be successful, it might be helpful to institute a minimum overall GPA requirement and/or minimum GPA in science classes for entry into the program.
- Pursue creation of the Vet Assistant program as a feeder into the Vet Tech program with a certificate of achievement awarded after 30 credits. This would serve to familiarize students with the Vet Tech program, and make more of them successful in the long run.

Resources:

- Hold regular faculty meetings to increase communication and faculty collaboration between students, faculty and outside external rotation facilities.
- Work with WebCollege to add a video of Roles of Veterinary Technician and develop a brochure or flyer with the VT duties and opportunities available upon completion of the Program and exam licensing.
- Have a backup plan in place if external partnerships, upon which much of the hands-on experience is predicated, have any unexpected crises and cannot continue to support VTP.

The recommendations from the previous PUR have been addressed or are still in progress. The recommendations for the Curriculum section were met in that a Veterinary Assistant Program has been started. The courses in both programs are under the prefix VETN. All VETN classes are on a three year assessment schedule, and we continue to improve our assessment efforts each semester. We have continued discussing how to hold classes so that students can attend the Veterinary Nursing Program while working as many hours as possible. With the commitment the education requires, it is not feasible to work full time. Many of our students do work full time (35 hours a week) because the veterinary hospital they work for is accommodating of their class schedule (veterinary hospitals offer

evening and weekend hours). Again, full time employment is not ideal however, as the demands of studying and attending class need an appropriate time commitment and attention. The Veterinary Nursing Program does offer a part-time option which extends the commitment to the program from two years (four semesters) to four years (eight semesters). Most students prefer to cut back on working, take out student loans and apply for scholarship opportunities, and complete the program in two years (with the summer off between first and second year).

After the pandemic and holding classes online, we have been considering a hybrid model for classes to hold lectures online and labs in person. Any changes we make to our delivery of content involves approval by the AVMA-CVTEA and could warrant an additional accreditation visit. We did design our new Veterinary Assistant Program so that students are able to work. Two of the classes in the fall semester are hybrid (mainly online with some in-person requirement). The core Fall class has lectures in the early evening twice a week and lab on Saturday mornings. We have a similar schedule for the core class in the spring semester, though Veterinary Assistant students also need to have a rotation class in the veterinary community. This class is scheduled for seven and a half hours on Thursdays. We are pursuing accreditation for the Veterinary Assistant Program from the National Association of Veterinary Technicians in America (NAVTA), and there is a requirement for 100 hours off-site at veterinary facilities. Because of this need and the need for Veterinary Nursing students to have their rotation classes, we need to have a schedule that coincides with the business hours of most veterinary hospitals. This requires day hours. Our students usually work later afternoons and weekends.

The recommendations for the Demographics and Enrollment section are ongoing. We recruit students from various high school and college fairs. We have done various advertising campaigns as well (sending of brochures and letters to targeted markets). We have had good retention in our program (except for the pandemic years). The Veterinary Assistant Program will have a pathway for completers to gain admission to the Veterinary Nursing Program.

The recommendations for the Resources section has been met and exceeded! We have continued to have department meetings and have close communication with instructors, students, and community partners. We have a new facility at the Meadowood North building and are not reliant on external partnership for primary labs.

2.B. Workforce Needs (AAS degrees and certificates; allied health programs only)

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Describe how your program(s) is/are meeting workforce needs, especially in the Northern Nevada region, by answering the accompanying questions. The following are potential resources for labor market data, though other sources may be referenced.

Nevada Department of Employment Training and Rehabilitation (DETR) (<https://detr.nv.gov/>)

Economic Development Authority of Western Nevada (EDAWN) (<http://edawn.org/>)








U.S. Bureau of Labor Statistics (<http://www.bls.gov/>)

- **What is the evidence for the regional need for the program (DETR and EDAWN data)?**
- **What is the evidence that program curriculum meets the latest industry trends or workforce needs?**

The Veterinary Nursing Program is meeting the workforce needs of northern Nevada region as there is a demand for Licensed Veterinary Technicians. Our graduates have all found gainful employment (unless they have decided to pursue another path such as continued education or entry into a career in the veterinary field that does not require licensing).








The outlook for Veterinary Nurses/Vet Technicians per the US Bureau of Labor Statistics is as follows:

Summary

Quick Facts: Veterinary Technologists and Technicians	
2021 Median Pay 	\$36,850 per year \$17.72 per hour
Typical Entry-Level Education 	Associate's degree
Work Experience in a Related Occupation 	None
On-the-job Training 	None
Number of Jobs, 2021 	122,800
Job Outlook, 2021-31 	20% (Much faster than average)
Employment Change, 2021-31 	24,100

The outlook for Veterinary Assistants per the US Bureau of Labor Statistics is as follows:

Summary

Quick Facts: Veterinary Assistants and Laboratory Animal Caretakers	
2021 Median Pay 	\$29,780 per year \$14.32 per hour
Typical Entry-Level Education 	High school diploma or equivalent
Work Experience in a Related Occupation 	None
On-the-job Training 	Short-term on-the-job training
Number of Jobs, 2021 	103,500
Job Outlook, 2021-31 	19% (Much faster than average)
Employment Change, 2021-31 	20,000

It is worth noting that the hourly pay rate for veterinary technicians/nurses and veterinary assistants in our area is higher than the median pay in the summary tables. Entry level veterinary nurses on average start at \$19-23 per hour and veterinary assistants are paid on average \$15-17 per hour.

The veterinary programs at TMCC are participating in Handshake (an online source of job advertisements), and there are multiple job postings in our area. We receive job advertisements for positions in other states as well.

2.C. Accessibility and Cost of Instructional Materials

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- **What are faculty in the department/unit currently doing or planning to help ensure that instructional materials are accessible to students with disabilities? Examples include attending Professional Development accessibility sessions, running accessibility checkers on materials, and completing the “Creating Accessible Content” workshop.**

- **What are faculty in the department/unit currently doing or planning to offer affordable instructional materials to students? Examples would include internal development of educational materials or utilization of open educational resources (OER).**

- Faculty attend Professional Development accessibility sessions and have run accessibility checkers on materials when applicable.

- The Veterinary Nursing Program and the Veterinary Assistant Program are using as many online and open educational resources (OER) as possible. We have significantly reduced the number of textbooks that are required purchases by the students. Almost all of the second-year courses in the vet nursing program do not have a required textbook. The one class that required a purchased resource has found an online option. We contacted the publisher and students are eligible to purchase a year subscription for one-fifth of the cost of the book.
- The program has multiple stethoscopes including teaching scopes with a dual head so a student can listen at the same time as the instructor. This saves veterinary assistant students from purchasing a stethoscope.
- The program has established an externship agreement with a major chain of veterinary hospitals (VCA). The agreement allows for paid externships in any of the VCA hospitals.
- The program is seen as a resource to veterinary facilities. After discussion with a local hospital called Options who needed help with recruitment, the facility followed our suggestion to offer a scholarship to a first year student and a second year student that if the student came to work for them, their education would be paid for.

2.D. Catalog Review

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- **Is the program information in the catalog correct, including descriptions, PLOs, course descriptions, and course offerings, accurate?**
 - **Does the program's suggested course sequence in the catalog allow for completion of degrees within 2 years and/or certificates within 2 semesters for full-time students?**
 - **Are there any courses that the department has not offered in 4 or more years? Please indicate whether you plan to update and offer, or deactivate the(se) course(s) in the next academic year.**
- The Veterinary Nursing Program went through a review of the catalog information, course descriptions, and PLOs to ensure accuracy with Julia Bledsoe before she retired from the College. The new Veterinary Assistant Program courses were entered with the help of Jeffrey Metcalf and received approval from the Curriculum Committee. The catalog pages have been reviewed.
 - The Veterinary Nursing Program's suggested course sequence in the catalog allows for completion of AAS degree in Veterinary Technology within 2 years once students start the program (having already taken their prerequisite courses and general education requirements). The Veterinary Assistant Program can be completed in 2 semesters (6 credits per semester). Program courses are offered

in the fall and spring semesters (there are no summer courses).

- There aren't any courses that the department has not offered in 4 or more years.

3.B. Evidence of Program Learning Outcomes Assessment

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Summarize the most significant program assessment results since your last PUR. These will come from past CARS, APRs, and Action Plans and assessment data within eLumen. Please discuss course assessment findings as they apply to the program and program learning outcomes.

Veterinary Technician National Exam (VTNE) Pass Rates

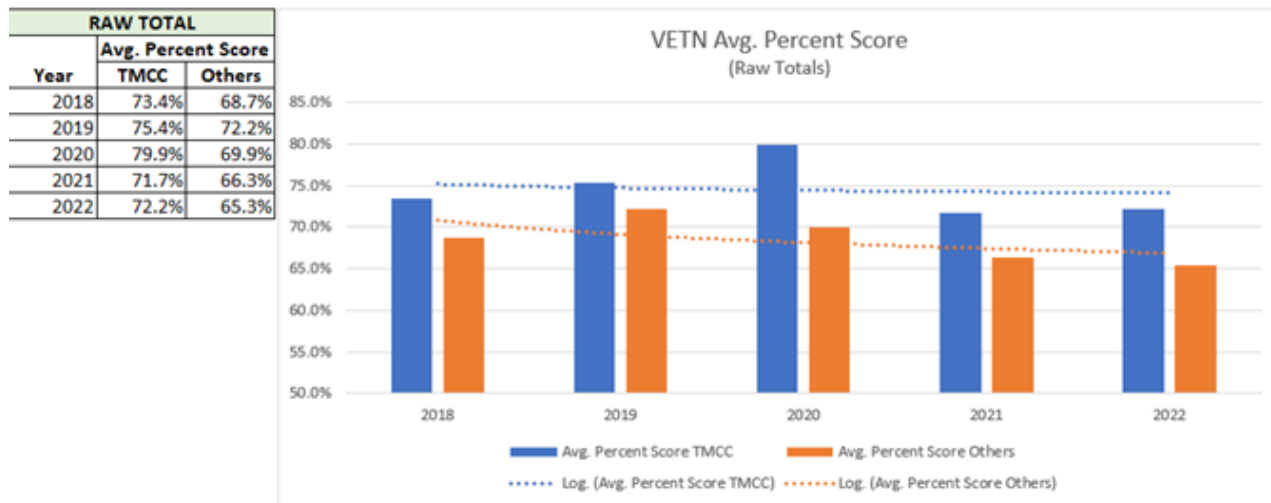
Date Range	Number of Eligible First-time Candidates	Three Year VTNE Pass Percentage
Jul. 1, 2019-Jun. 30, 2022	38	95%

Graduates of the Veterinary Nursing Program take the Veterinary Technician National Exam to pursue licensing in their state of choice. The AVMA-CVTEA requires that we post on our website a three year pass rate for the exam. This is updated yearly. Currently our pass rate is 95%. Based on a 2018 article assessing veterinary technician education, 24% of vet tech programs had a pass rate of 90-100%. We are very proud of our high pass rate for the VTNE. Also of note, our graduates that do not pass the VTNE on the first attempt usually pass on the second attempt (the exam is offered three times in a year).

Link to the article: <https://www.avma.org/javma-news/2018-05-01/assessing-veterinary-technician-education>

Because of the emphasis from the AVMA-CVTEA on VTNE exam scores, this is an important assessment tool for us. For example, in the past five years of data, TMCC graduates have consistently scored higher than the overall pool of first-time test takers. In addition to analyzing general test results, our program analyzes the break down for the areas of the test for our graduates and also compares year to year results.

Example of general analysis:



Describe how department faculty implemented plans to improve students' achievement of program learning outcomes. What changes did you make to the program based on assessment results and improvement plans?

When VTNE scores are reported to our program, we receive a breakdown of the scores from our graduates in the nine key areas of the test. We assess the areas where our students were strongest and weakest. Per the information above, we compare the data from year to year and we compare our students with the candidates taking the exam in the country overall.

Besides our pass rate, a strength of our program is our commitment to student success and our frequent meetings to discuss how students are doing throughout the semester. We monitor their skills and their exam scores - which we also compare with previous years (we have consistently had the same instructors teaching the same classes for the most part). We continually make small improvements such as changing exam questions or creating new assignments with the goal that our students learn and succeed, not only on the VTNE, but in their careers.

3.C. General Education Outcomes Assessment (if applicable)

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- Describe which general education learning outcomes (GELOs) you assessed in your department/unit and summarize the most significant assessment results.
- Describe how department faculty implemented plans to improve students' achievement of GE learning outcomes. What changes did you make to general education based on assessment results and improvement plans? Do any CLOs need to be changed

to align with GELOs?

n/a

3A. Curriculum Mapping

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Map Origin: Skills Certificate, Veterinary Assistant Map Target: Skills Certificate, Veterinary Assistant		Veterinary Assistant Skills Certificate													
		Skills Certificate, Veterinary Assistant													
GELOs	PSLO1: Perform common tasks relating to the office/reception area of the veterinary hospital including client communication, appointment scheduling, and paperwork relating to admission and discharge of patients.	PSLO 2: Understand the roles and responsibilities of the veterinary health team including professional conduct and recognize common legal concerns.	PSLO 3: Recognize and explain proper response to veterinary medical emergencies.	PSLO4: Explain the process of euthanasia, post-mortem care, and understand the animal bond and grief.	PSLO5: Utilize basic medical terminology and abbreviations and demonstrate a basic understanding of small animal anatomy.	PSLO6: Explain common diseases and medical conditions and learn basic veterinary procedures including vaccination.	PSLO7: Identify common animal behaviors and animal breeds and demonstrate common restraint methods and tools relating to these animals.	PSLO8: Understand small animal nutritional requirements and animal diets.	PSLO9: Explain and demonstrate basic husbandry practices of a veterinary facility including sanitation procedures, OSHA safety standards, and recognition of zoonotic concerns.	PSLO10: Demonstrate basic husbandry techniques including grooming.	PSLO11: Explain and perform common veterinary nursing duties appropriate for the veterinary assistant.	PSLO12: Assist in performing surgical preparations and understand surgical nursing including identification of common instruments and proper care and sanitation procedures.	PSLO13: Explain and assist with monitoring of recovery surgical patients and understand post-operative end of day routines.	PSLO14: Explain and demonstrate restraint, preparation, and positioning of patients for diagnostic imaging and handling of the radiographic record.	PSLO15: Explain and demonstrate collection and preparation of various biological samples for laboratory analysis.
VETN00															
1. Students will be able to perform the functions of a front office/reception staff member in a veterinary hospital. These functions include communicating with clients, scheduling appointments, advising and discharging patients, and using a practice management software program appropriately for various aspects of the medical record.															
2. Students will be able to identify common breeds of animals seen in veterinary facilities, recognize behavior of various species and respond appropriately with human handling skills, and perform basic tasks to support the function of the veterinary facility including cleaning, husbandry, and entry and training procedures.															
3. Students will be able to competently communicate with clients, take a thorough patient history, and perform a physical exam.															
VETN05															
1. Recognize veterinary medical terminology through essential word parts and terms that are presented in the context of basic anatomy, physiology, and disease conditions, enabling the student to apply new terms to practical clinical situations.															
2. Incorporate veterinary medical terminology into all aspects of their coursework including writing assignments, tests, physical exams, and communication with fellow students and instructors. Terminology is also incorporated into VETN 10 and 110 primarily.															
3. Demonstrate the ability to spell veterinary terms correctly. Students will also demonstrate proper pronunciation when using terminology in other classes.															
VETN10															
1. Assist in performing surgical preparations and patient recovery and understand surgical nursing including end of day routines which include proper care of instruments and sanitation procedures.															
2. Explain and demonstrate restraint, preparation, and positioning of patients for diagnostic imaging and handling of the radiographic record.															
3. Explain and demonstrate collection and preparation of various biological samples for laboratory analysis using OSHA and chemistry analyzers common to veterinary practice.															
4. Understand common diseases of veterinary patients and perform basic treatments including filling drug orders and recognizing prescription data.															
VETN15															
1. Demonstrate an understanding of basic management procedures used in veterinary hospitals.															
2. Demonstrate how to prepare a resume and perform an interview.															
3. Understand euthanasia, after care, and client support.															
VETN20															
1. Perform the functions of a veterinary assistant as described in the Nevada Veterinary Medical Board while under direct supervision at a designated veterinary facility.															
2. Incorporate their knowledge of veterinary practice safety while at the off-site locations including recognizing unsafe animal behavior and zoonotic disease potential, and using appropriate aseptic techniques and guidelines for x-ray safety.															
3. Demonstrate professionalism while participating in the daily operation of a practice area veterinary hospital.															

Please analyze the following. Remember to paste a copy of your curriculum map.

- **PLOs: Do all PLOs reflect what you want students to demonstrate once they complete the program? Are there any PLOs that need to be updated?**
- **Potential gaps and redundancies: Are there any PLOs that are not addressed in the curriculum? Are there any unwanted redundancies of PLOs in the curriculum?**
- **CLO alignment: Is there a need to modify any course learning outcomes so that courses better support PLOs?**
- **Course sequencing: Is there a need to modify the course sequencing so that learning is scaffolded throughout the program? In other words, courses taken earlier in the program sequence should introduce PLOs, and courses taken later in the sequence should reinforce PLOs by offering students additional opportunities to practice.**
- **Curriculum and learning opportunities: Is it necessary to introduce new learning opportunities to reinforce learning in specific courses? These could be modules or assignments in courses, additional courses, and/or co-curricular opportunities that would be required of all students in the program.**
- **Do you need to make any changes to the curriculum map after this analysis?**
- **Other?**

The first map is for the Veterinary Assistant Program. There are six pages of skills that are required for accreditation from the National Association of Veterinary Technicians in America, the organization overseeing standards for veterinary assisting programs. As of note, a veterinary assistant is not a licensed professional in the State of Nevada. When creating the curriculum map based on the essential skills, the skills were condensed down to fifteen key program student learning outcomes. The courses for the program were established based on the learning outcomes. A link to the guidelines is here: <https://d2vjg8vjbxfu1.cloudfront.net/app/uploads/20211206143826/Essential-Skills-for-VA-rev-7-2020.pdf>

The second map is for the Veterinary Nursing Program. There are only two program student learning outcomes because overall the goal of the program is to graduate a competent entry-level veterinary nurse (veterinary technician). The program was established following the guidelines from the American Veterinary Medical Association - Committee for Veterinary Technician Education and Activities. A link to the guidelines is here: <https://www.avma>.

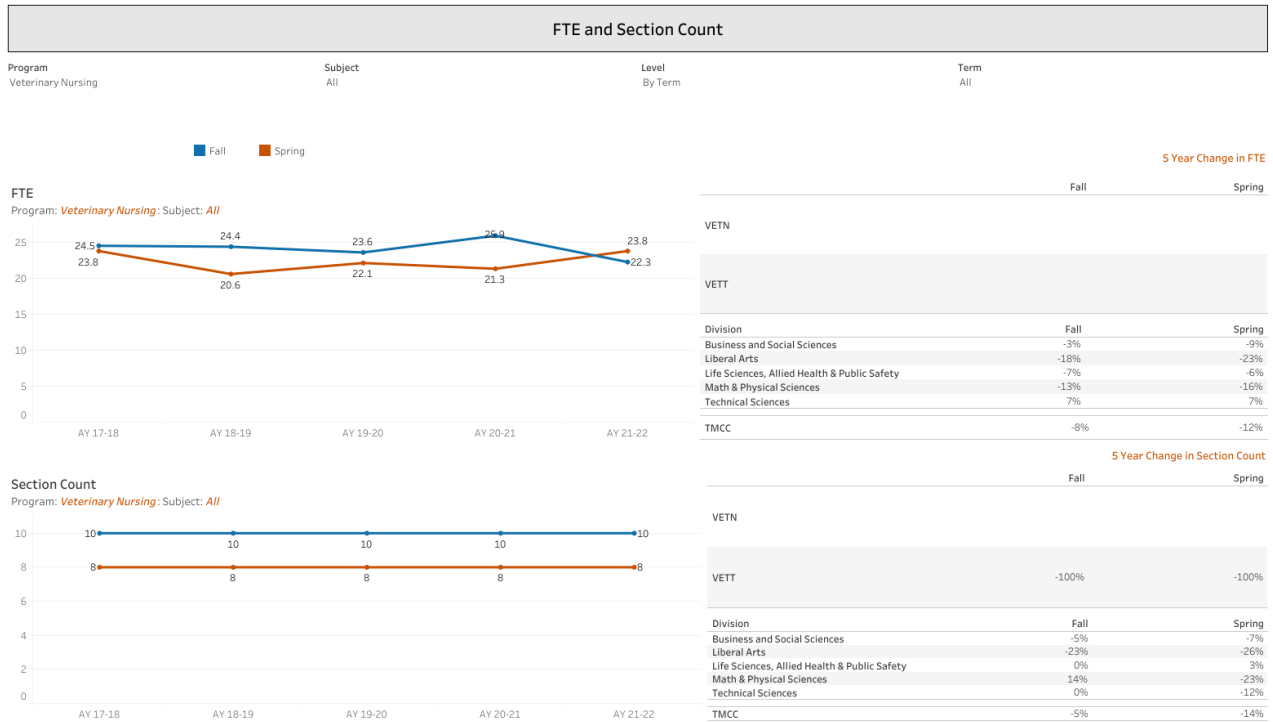
org/sites/default/files/2022-11/Manual_PP_CVTEA_November_2022.pdf

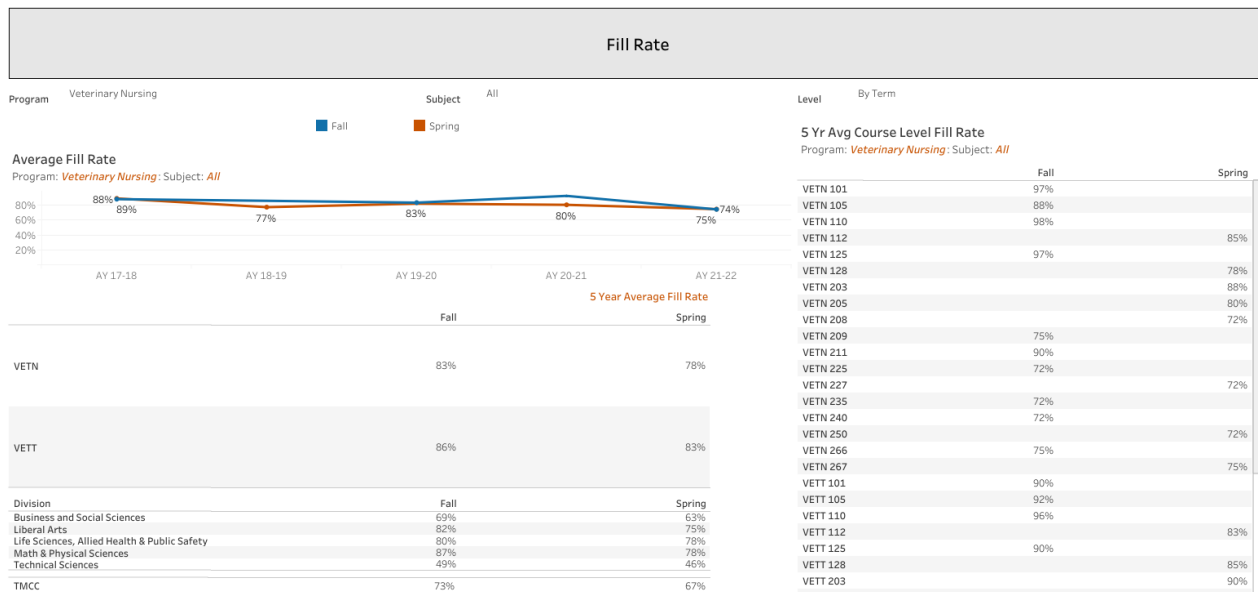
Pages 62-74 contain the essential and recommended skills necessary for each vet tech program. Skills that are italicized and have an asterisk are mandatory hands-on skills. We have a skills notebook that each student receives at the beginning of the program with all of the skills that are performed and signed off on by instructors in the program during VETN classes. Many skills are performed more than once. The AVMA-CVTEA will ask for completed skills logs at various times and during accreditation visits to assess that we are performing all of the skills.

Our VETN classes follow a specific sequence as knowledge in first semester classes is built upon throughout all four semesters. We do not need any changes in our learning outcomes as they are listed. We keep up to date on changes from the accrediting bodies and adjust curriculum within classes or change the skills log to reflect updates. The AVMA-CVTEA publishes and emails changes to the essential skills list every year.

4.A. FTE and Section Count

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Please analyze the trends in FTE and course section counts. Discuss what these trends suggest about the viability of program enrollment.

When the Veterinary Nursing Program changed its name from Veterinary Technician Program, we also changed the prefix for courses from VETT to VETN. We have had an enrollment cap for each class in the program of 16 students. We had planned on increasing the class sizes to 20; however, with the pandemic, we kept the class size at 16 (though in the system the cap is 20). We have had a consistent number of students enter the Veterinary Nursing Program each fall. Inevitably we lose a student or two from fall to spring during the first year as either a life event happens and a student drops out of the program, or the student did not adequately prepare for the amount of studying needed to be successful in the program. When we lose a student during the first year, we are very supportive of having the student return the following year to start classes again. We rarely lose a student during the second year of the program. The fill rate in the chart above reflects this - there are higher percentages for classes in the first semester of the program but into second-year classes, the percentages remain consistent. We have had a few students struggle through the first year of the curriculum and then start the second year as part-time students. This enables the student to focus on a few classes at a time. We have found the part-time option to be successful based on student feedback.

We offer a lecture section for all of the students in the cohort and lab sections are designed for half of the cohort. Smaller groups of students in labs allows us to keep the hands-on ratios we have established with the AVMA-CVTEA. Since the students work with live animals, a small ratio of students to instructor per animal helps to ensure student safety.

4.B. Course Fill Rates and Unsuccessful Enrollment Attempts

Veterinary Nursing 2022-23 PUR Self-Study

Unsuccessful Enrollment Attempts

Program: Subject:

5 Yr Average Unsuccessful Enrollment Attempts

An enrollment attempt is considered unsuccessful if the student tried to enroll in one or more sections of a course but could not because the section was full, and who ultimately did not take the course that term. If they eventually enrolled in another section, they are not counted as unsuccessful. And a student is only counted once per course no matter how many section-level attempts they had.

Course Level

Program: **Veterinary Nursing**

Course Level	Count
VETN101	1.00
VETN110	2.00
VETN112	3.00
VETN128	2.00
VETN203	4.00
VETN205	1.00
VETN211	1.00
VETN227	1.00
VETN235	2.00
VETN240	1.00
VETN250	1.00
VETT128	1.00
VETT205	1.00
VETT240	2.50
VETT250	1.00

Division & College Wide

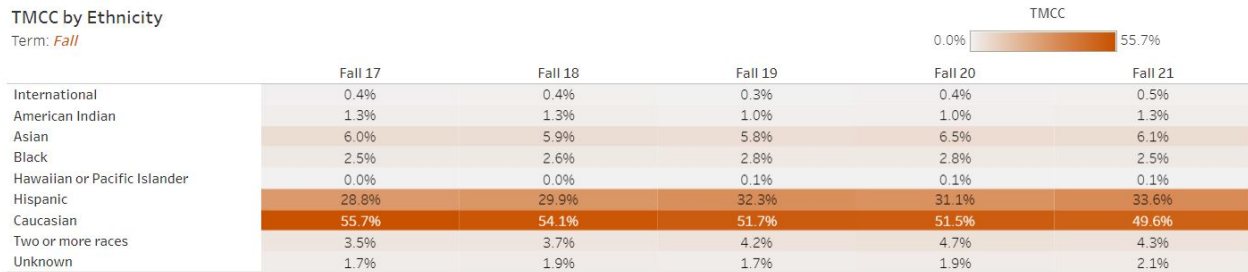
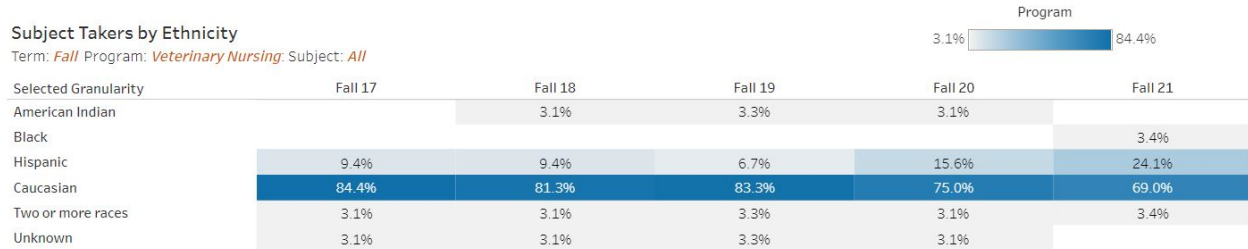
Division	Count
Business and Social Sciences	4.41
Liberal Arts	8.57
Life Sciences, Allied Health & Public Safety	7.80
Math & Physical Sciences	21.56
Technical Sciences	3.14
TMCC	7.73

Please analyze the trends in course fill rates and unsuccessful enrollment attempts. Discuss what these trends suggest about meeting student demand.

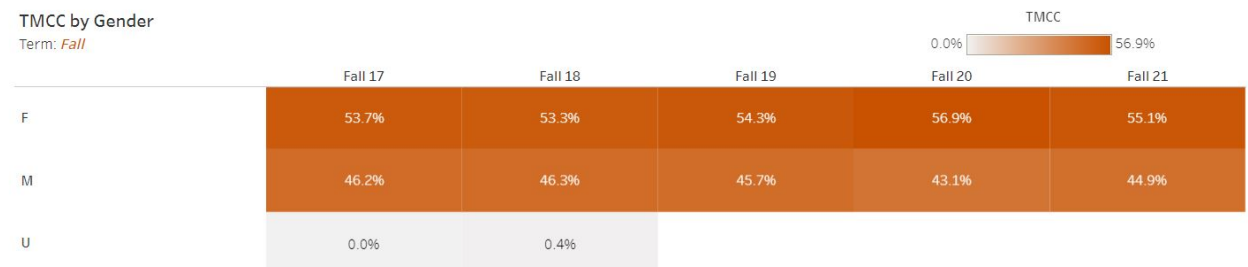
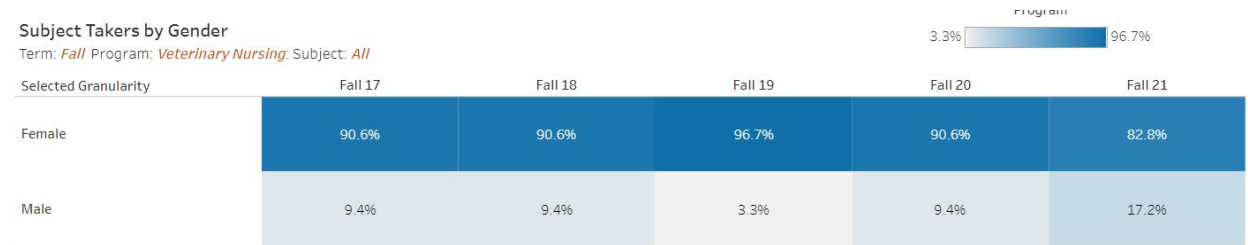
Since the Veterinary Nursing is a selective program, all of the students in a class are successful in their enrollment. There are a few numbers in our chart above - this could be because a student tried to enroll in a lab that was closed. The student simply enrolled in the other lab section. It is worth noting that our students do not attend lab consistently in the morning if that is the lab section they signed up for. Our students are alerted that regardless of what lab section they sign up for, they are to follow the lab schedule in the syllabus. Some of our lab experiences are in the morning with all of the students - for example an off-site visit to a specific veterinary facility. We also rotate students through various teams. This ensures that students work with various classmates. Given the schedule in a veterinary facility, we do not want students to only experience morning tasks, they need to experience end of day (afternoon) tasks as well. We have not had a problem with students not complying with this requirement.

4.C. Student Demographics: Ethnicity, Gender, Credit Load, Student Status, and Age Range

Veterinary Nursing 2022-23 PUR Self-Study



Unlike the College in regards to ethnicity, the majority of students in the Veterinary Nursing Program are Caucasian. We have been seeing an increase in Hispanic students in the past two years however.



The veterinary field is traditionally female. Our ratio of female students to male students is much higher than the college population. Unfortunately the veterinary field does not pay as well as the medical field for humans. Men who anticipate being married and having a family and thus being the main source of income often choose fields where they are paid better. We do show an increase in our male student population in 2021 but this is not a trend. We try to encourage males to enter the field, but male students often choose other fields of study. The trend for veterinarians (who are paid higher salaries) has also been predominantly women. There was a good article by the AVMA explaining this trend. The beginning of the article is as follows:

"Men have become a minority among veterinary students, and no one knows exactly why—or how to respond.

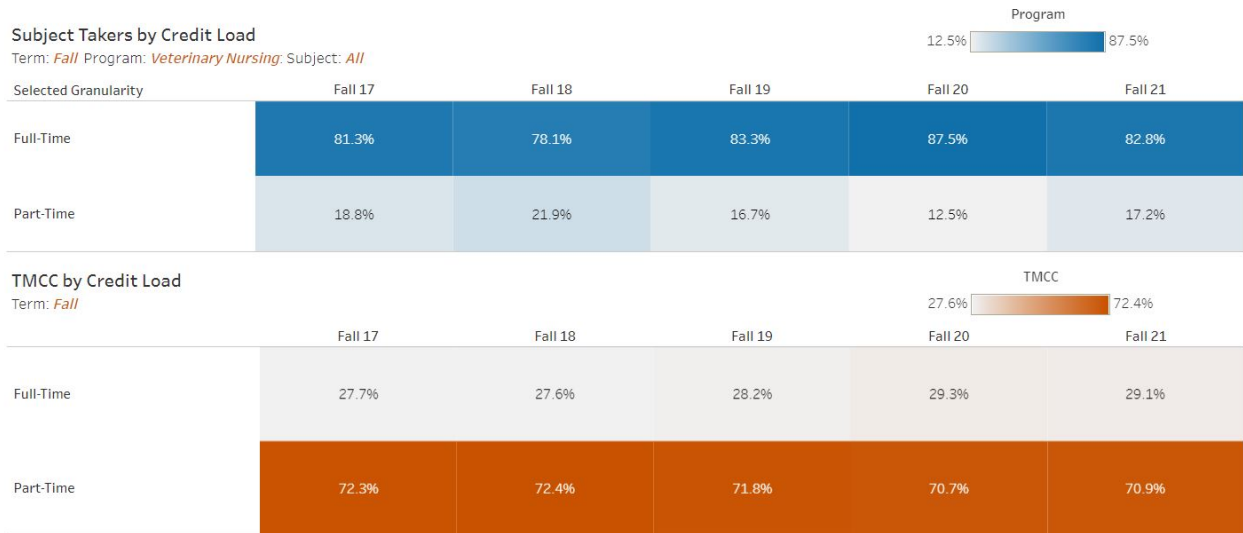
Male enrollment in U.S. veterinary colleges decreased from 89 percent for the 1969-1970 school year to 22.4 percent for 2008-2009, according to the Association of American Veterinary Medical

Colleges.

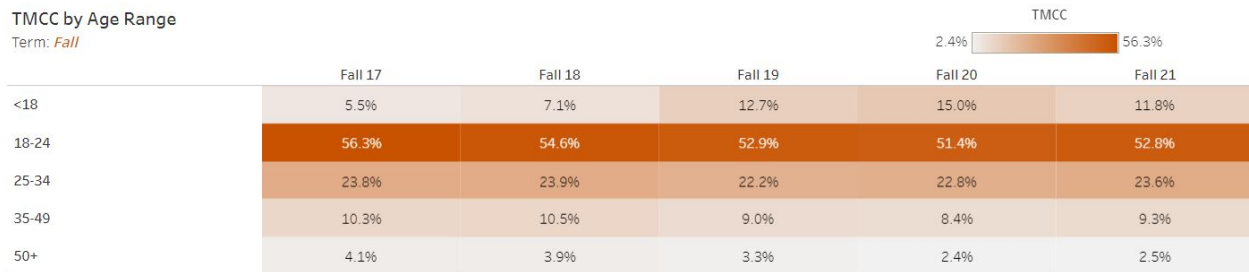
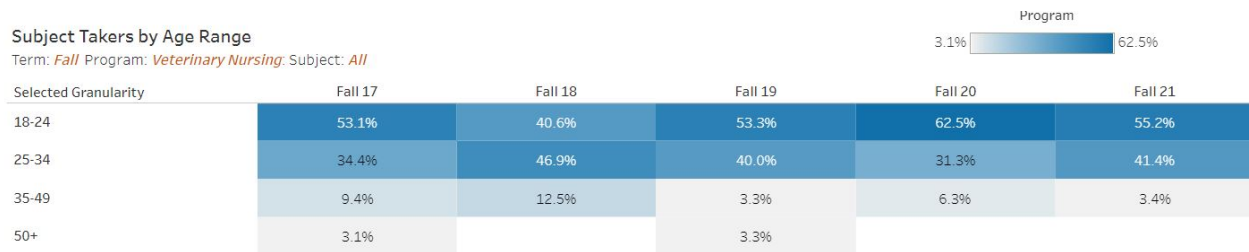
National trends might help explain the gender shift at veterinary colleges. Female students have become the majority in many health professions, but not in fields such as engineering and computer science. Male students still have a slight majority in human medicine and dentistry, which pay better than veterinary medicine. The switch in the veterinary profession's focus from food animals to companion animals could play a role. Also, the trend toward female veterinarians might be self-perpetuating.

Many students and administrators at veterinary colleges think the profession needs men to maintain a diversity of perspectives and reflect the country's population. Some believe the profession should recruit men actively, partly in hopes of alleviating shortages in food animal practice."

Our graduates typically enter companion animal practice where the majority of LVTs are female.



Unlike the College demographic for student status, our students are full time students as our curriculum and credit load is designed for full time students. As noted previously, we will work with students to attend classes on a part time basis. We do have a pathway for part time students but because of the structure of our offering courses, this doubles the amount of time the student is in the program.



While the majority of students at TMCC are in the 18-24 age range, the majority of our students are 18-34 years. Since our program requires pre-requisites and general education classes which students can complete over a few years, we have approximately half of our student population in the 25-34 age range. We have had older students in the program who have been in the field as assistants and decided to move toward becoming licensed. Additionally, our mature students are often starting a new career in a field they always thought about ("I always wanted to work with animals"). These older students are often very successful academically.

Briefly describe the typical student profile in terms of ethnicity, gender, credit load, student status, and age range in your program/unit, including how they compare to demographics of the college. Please note any potentially underserved student populations and discuss ideas for closing potential equity gaps. An equity gap is where there is a significant and persistent disparity in access or achievement between different groups of students.

Does the program’s teaching staff look like its student population? If not, discuss ideas for how faculty can use more inclusive teaching methods.

Please see the explanations above under each chart.

As noted, the majority of people in the veterinary field are Caucasian women though we are seeing more Hispanic women entering the program. Our faculty are all white women - the majority of whom are graduates of the program. We hire LVTs as lab assistants for live animal labs every few years (depending on the availability of our current employees), often hiring program graduates because we are the only accredited program in northern Nevada. At some point, we will have interest in employment from a male or non Caucasian LVT.

5.A. Course Completion Rates

Veterinary Nursing 2022-23 PUR Self-Study

Please describe any substantial trends or shifts that you see in the overall course completion rate and successful completion (C or better). What might these trends or shifts mean? Next, disaggregate the data by student demographics. Discuss any potential equity gaps and ideas for closing these gaps. An educational equity gap is where there is a significant and persistent disparity in educational attainment between different groups of students.

Avg Completion & Successful Completion Rates by Subject

Program: *Veterinary Nursing* Subject: *All*

Subject		AY 17-18 AY	AY 18-19 AY	AY 19-20 AY	AY 20-21 AY	AY 21-22 AY	5 yr Avg
VETN	Completion Rate				97%	96%	97%
	Successful Completion				93%	95%	94%
VETT	Completion Rate	100%	100%	98%			99%
	Successful Completion	99%	97%	81%			92%

5 Yr Avg Completion & Successful Completion Rates by Division

	Business & Social Sciences	Liberal Arts	Life Sciences, Allied Health & Public Safety	Math & Physical Sciences	Technical Sciences	TMCC
Completion Rate	80%	78%	86%	70%	82%	79%
Successful Completion	72%	70%	76%	54%	75%	69%

As noted, our program had VETT classes until we changed the program name and class prefix to VETN.

We have an excellent completion rate!

We have an excellent completion rate in part because of our support for our students. Once a student enters the program, we focus on their success by tracking their grades as a department so we can identify struggling students early on in a semester. The Academic Program Director meets with all of the first year students in the fall semester and the full time faculty member meets with them in the spring semester. We ask about various questions including study habits. We encourage study groups and facilitate extra time in lab to study. We help students with personal issues including guiding them to the appropriate resources at the College. We have a strict attendance policy so that students are in class and accountable. We get to know our

students over the two years they are with us and actively get them to engage in class. We do not see equity gaps in course completion - every group is higher than the College average.

5.B. Graduation and Transfer

Veterinary Nursing 2022-23 PUR Self-Study

Outcomes: Awards & Transfer

Program
 Veterinary Nursing

This section shows the number of degrees your program has awarded over the past 5 years. A second bar chart shows the rate at which students who graduate from your program transfer to other institutions.

Gender (All) Ethnicity (All) Credit Load (All) Age Range (All) First Generation (All) Pell Eligible (All)

Awards

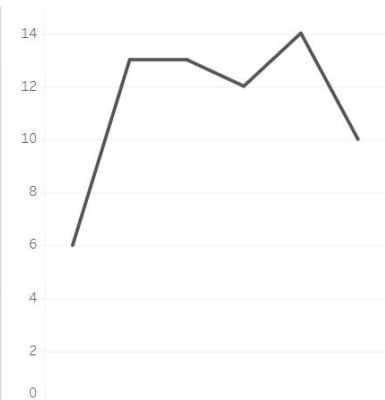
Program: *Veterinary Nursing*

Program 1 14

	AY 17-18	AY 18-19	AY 19-20	AY 20-21	AY 21-22	Total Awards
Degrees VET-AAS	13	13	12	14	1	53
VETN-AAS					9	9
Total Awards	13	13	12	14	10	62

Program Award Trend

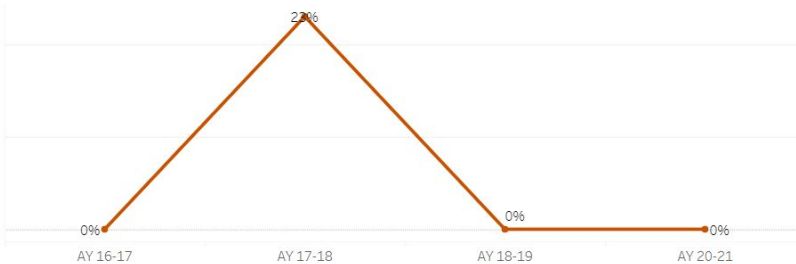
Program: *Veterinary Nursing*



Transfer Rate of Graduates

Program: *Veterinary Nursing*

Degree Type
■ Terminal



Transfer Schools

Program: *Veterinary Nursing*

	# of Transfer Graduates	% of Transferred Graduates
NSHE	4	100%
Non-NSHE	0	0%
Total Transfer Graduates	4	100%

The number of graduates from the Veterinary Nursing Program each year can vary. We generally graduate between 10 and 14 students per year.

Please discuss any trends or shifts that you see in the number of graduates and graduates who have transferred in the past 5 years.

Next, disaggregate the data by student demographics, and discuss any potential equity gaps: Which student populations are earning degrees or certificates compared to the demographic makeup of

the program? Do graduates resemble the student demographics of the program? If not, discuss ideas to mitigate potential equity gaps.

The following charts are taken from our most recent accreditation report to the AVMA-CVTEA:

Provide retention information for the last three complete academic years by completing the table below. (Use data based on a July 1st to June 30th year. Beginning enrollment is the total number of students enrolled in the program on July 1; Graduates is the number of graduates between July 1st to June 30th; New Starts is the number of students enrolling in the program between July 1st to June 30th; Re-entries is the number of students who re-entered the program between July 1st to June 30th; and Ending enrollment is the total number of students enrolled in the program on June 30th.)

	Year (2017-2018)	Year (2018-2019)	Year (2019-2020)
E = Enrollment (as of July 1)	32	29	32
NS = New Starts (July 1 to June 30)	16	15	15
RE = Re-entries (July 1 to June 30)	3	1	2
G = Graduates (July 1 to June 30)	13	13	12
EE = Ending Enrollment (as of June 30)	30	25	31
Retention % = (EE + G) / (E + NS + RE)	84.31	84.44	87.76

Provide number of graduates for each of the past five years including, the current year based on a July 1st to June 30th year. (If graduation occurs several times each year, show numbers of graduates in each academic term.) (Provide numbers for each program option separately)

Academic Term	Four years past (2016)	Three years past (2017)	Two years past (2018)	Prior year (2019)	Current year (2020)
Spring					
Total graduates	14	6	13	13	12

As noted previously, our cohort size for the starting class has been 16 students. We are consistently graduating 78% of our students.

We do have some students that are in the number for NSHE transfer - students who are continuing their education.

We track our graduates and where they are working based on keeping in touch with graduates and also through data from the Nevada Board of Veterinary Medical Examiners which keeps track of all the licensed veterinary technicians in the state.

6.A. Faculty Achievement

Veterinary Nursing 2022-23 PUR Self-Study

Describe the program/unit's full-time (FT) faculty credentials, experience, and highlights of significant activities and/or contributions to TMCC. Please use the format below for each FT faculty member.

- **Faculty Name, FTE**
- **Degree(s) or professional certification(s) awarded, discipline, awarding institution**
- **Substantial accomplishments or contributions to the community, especially those related to education or your discipline (e.g. mentoring, community service) (Please limit to 3)**
- **Number of years teaching at TMCC**
- **Total number of years in academia**
- **Primary courses taught**
- **Significant activities or contributions made to TMCC (Please limit to 3)**

There are two full time faculty members for the Veterinary Nursing Program, Julie McMahon, LVT, VTS (Dentistry) and Michele Noreen, DVM (author of this report). Per our AVMA-CVTEA accreditation, programs must have a full time equivalent of an LVT and a DVM.

- Julie McMahon
 - AAS degree in veterinary technology from TMCC. She also has a specialty credential in veterinary technology (a Veterinary Technician Specialist) in the field of dentistry.
 - Julie has taught dentistry labs all over the country. She has mentored many students at TMCC and also while working at Sierra Veterinary Specialists/Blue Pearl Reno. Julie was awarded the AVTE Margi Sirois Veterinary Technician Educator of the Year Award in 2022.
 - Julie was a part-time instructor in the Veterinary Nursing Program for over ten years and has been the full-time instructor since July 2020. All of her years in academia have been at TMCC.
 - Julie teaches VETN 101, 105, 128, 235, and 250 (she has a two-credit overload in the fall and a one-credit overload in the spring).
 - Julie is in her fifth semester of her tenure track. She consistently receives excellent ratings from her tenure track committee. Julie is the club advisor for the Student Chapter of the National Association of Veterinary Technicians in America. She is also a faculty senator and a volunteer member of the Washoe County Regional Animal Services advisory board.
- Michele Noreen
 - Doctor of Veterinary Medicine degree from North Carolina State University College of

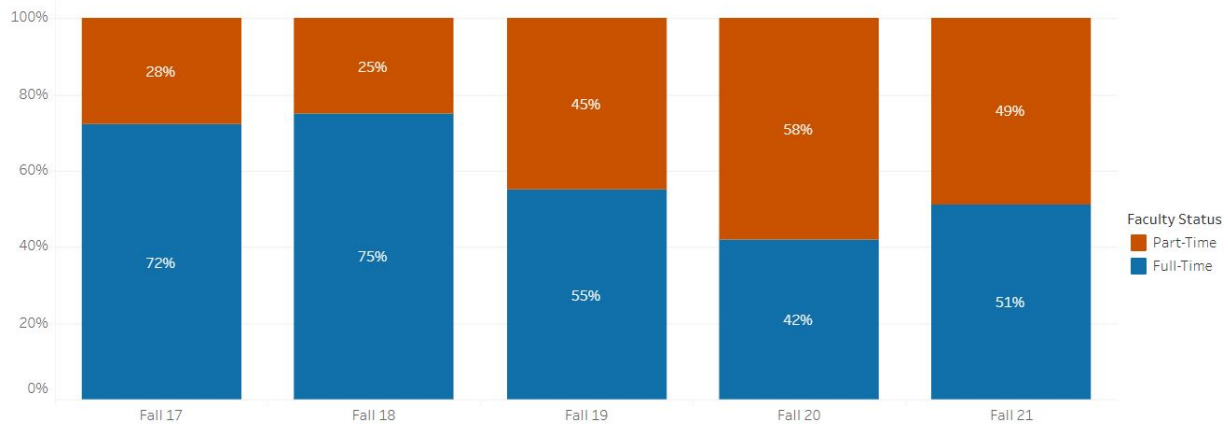
Veterinary Medicine, May 2000

- Has been involved with Washoe County Regional Animal Services and various rescue organizations and has created many contacts. She has mentored various students over the years and has recruited the amazing instructors the programs currently have!
- Started as a part time instructor in 2005 for one semester then became the full time tenure track instructor. Left the college for two years (2009-2010), returned as program coordinator in 2010. Has been in this position (now called Academic Program Director) for twelve years. This is a total of over fifteen years of service to the College (this is also the total number of years in academia).
- Michele teaches VETN 103, 209, 235 (labs), 227 (labs), and oversees 266, 267, and 130.
- Michele has completed four AVMA-CVTEA accreditation visits. She oversaw the move from Redfield to Meadowood and started the Veterinary Assistant Program.

6.B. FT/PT Faculty and Student Credit Hours Taught

Veterinary Nursing 2022-23 PUR Self-Study

Student Credit Hours
Program: *Veterinary Nursing*



The above section shows the percent of student credit hours that were taught by Full-Time vs Part-Time faculty within your program's subject area. These student credit hours are not necessarily enrollments of your declared majors, they are enrollments by all students taking your courses. Student credit hours are defined as the sum of (enrolled students x units).

Headcount & FTE
Program: *Veterinary Nursing*

	Full-Time		Part-Time	
	Headcount	FTE	Headcount	FTE
Fall 17	2	1.3	1	0.4
Fall 18	2	1.3	1	0.4
Fall 19	2	1.0	3	0.7
Fall 20	2	0.7	3	1.0
Fall 21	2	1.0	3	0.7

Describe the trends or shifts in the number of full-time (FT) and part-time (PT) faculty, and the number of student credit hours (SCH) taught by FT and PT faculty since the last program/unit review. What Impact, if any, have these trends or shifts had on the program/unit?

There has been no change in the number of full-time faculty members since the last PUR (the program has always had two FT faculty). There are additional adjunct faculty members including Erica Prucksakorn, LVT who is on a LOB contract because of her number of credit hours being taught. This semester (Fall 2022) Erica is teaching nine credits due to her being the lead instructor for the new Veterinary Assistant Program. Erica also continues to assist in VETN 235 labs as an hourly paid LVT.

In the past few years, the number of credits for release time for the Academic Program Director has increased from three to six. With the start of the Veterinary Assistant Program, there is a special assignment position for the Director of the program which includes a three-credit release per semester. This explains the change for FTE as Michele has nine credits of release per semester for all of the administrative duties for both programs. Please note, we have had more part-time faculty teaching but have not seen a change with completion rates for the program. This is partially because of the program's 'policy' of providing part-timers with mentorship and all of the materials previously created for the course they are teaching. The goal is that a new instructor makes improvements to the course and when they are no longer teaching, they in turn deliver the materials to the director to give to the next instructor. We are a very interactive department with the goal of helping new and current adjunct faculty as they in turn help our students.

6.C. Support Staff

Veterinary Nursing 2022-23 PUR Self-Study

Describe the program/unit's support staff, including their FTE, major duties, and any specialized credentials necessary to carry out their duties. Is the number of staff adequate to support the program/unit? Explain.

The Veterinary Nursing Program and the Veterinary Assistant Program have one Administrative Assistant II and one Administrative Assistant III, both are full time employees of TMCC. Their responsibility is to complete the administrative duties as outlined in their job profile from the Human Resources Department. The programs are supported adequately.

6.D. Facilities and Technology

Veterinary Nursing 2022-23 PUR Self-Study

Describe the facilities and technology used by the program/unit, and discuss any unique requirements. These may include labs, studios, off-campus sites, computer classrooms, specialized equipment, etc. Are program/unit facilities and technology adequate to support the program? Explain.

With our move to Meadowood North Suite 170, we have a lecture classroom, laboratory classroom, and a clinical space complete with a surgery suite. The new space is great. As submitted to the AVMA-CVTEA in our most recent accreditation report, we have a photographic report for our new facility and the off-site facilities that the students also go to. There is a list of mandatory equipment from the CVTEA and we have all of the required equipment (there are a few large animal items that are available to us - we don't actually own).

Our biggest challenge for adequate support is having the funds to repair and replace equipment. For example, the xray machine that was purchased in September of 2016 has needed repairs three times since it was purchased. The first time required spending approximately 1/6 of the veterinary nursing operational budget to insure and send the plate to be repaired. Luckily the second repair involved an inexpensive SIM card, but we had to pay for the company that oversees the software to perform an update. Normally veterinary hospitals have a maintenance agreement with the company so that repairs can be made and equipment maintained. These agreements are too expensive for us. The latest problem to the machine appears to be in part because the computer operating system is outdated. TMCC's IT department has been involved and has been very helpful, but the software company which produces the images from the machine itself has specific barriers that we cannot overcome. As an update, we were able to purchase a repair for the xray machine just this past week through the VPAA's office and available funds.

7.A. Five-Year Plan

Veterinary Nursing 2022-23 PUR Self-Study

Using your analyses from previous sections, develop a 5-year plan for the program(s). Include an estimated timeline of goal completion. Please address the following questions:

- **Using the most significant curriculum and assessment-driven findings, describe strategies to sustain or improve student learning. This may include deactivating existing courses or introducing new courses or programs to meet current trends in the discipline or industry.**
- **After considering the most significant enrollment findings, discuss strategies, if needed, to improve enrollment and address these factors. These may include more efficient scheduling, streamlining pathways to completion, outreach to underserved students, internal or external factors anticipated to impact future enrollment, etc.**
- **With respect to course completion rate, graduation, and transfer, discuss strategies to enhance student success and close equity gaps. These may include curriculum changes, pedagogical changes, streamlining pathways to completion, improving advising, mentoring, retention efforts, etc.**

Considering the above strategies, what are the major goals that the department/unit hopes to accomplish in the next 5 years? Include an estimated timeline of goal completion. How does the department or unit plan align with the Academic Affairs Strategic Plan or the College's Strategic Master Plan?

The Veterinary Nursing Program is concerned with this year's decrease in the number of applicants. We were unable to increase our enrollment to twenty students because we did not have enough applications. Prior to the pandemic the vet nursing program was competitive with a ratio of two to three applications for each of the sixteen seats. We have increased our participation at events that can bring us publicity. For example we recently had three students and an instructor at Santa Paws, an outreach event at a local veterinary hospitals that draws hundreds of community members. We have a brochure for each program and have give away items for student fairs. Our goal will be to print a specifically designed table top poster for TMCC outreach fairs for events in the spring and onward. To publicize the new Veterinary Assistant Program, we sent brochures to all of the area veterinary hospitals and pet daycare/boarding facilities. We will plan another publicity campaign for the spring semester. We continue our partnership with Charles River Laboratories to recruit students and in the Spring semester, the program director will reach out to the high schools in the area that have a veterinary/animal focus (for example AACT).

If we are able to increase our vet nursing enrollment to twenty, we need to consider the addition of lab sections for certain classes. Currently we have two lab sections for sixteen students so that we have a ratio of one instructor to four students per live animal. Our safety ratio per the AVMA-CVTEA is very good so we would need to carefully plan lab experiences to stay in compliance with our safety goals and accreditation. It would also be beneficial to bring on another adjunct veterinarian to teach labs in the program. Currently our part time hourly pay rate is geared for Licensed Veterinary Technicians, not Veterinarians. We would need to increase the hourly pay rate to adequately compensate a DVM for performing surgery and having the responsibility for controlled substances and patient safety. It would be beneficial to have this in place by Fall 2024.

In our effort to recruit part time students and transfer students, we have had two meetings with hospital owners and practice managers to announce our desire to recruit alternative students. We will plan a marketing effort for these students in the spring (2023). We already have an announcement on our webpage. We are planning a meeting for the spring where veterinary assistant students can meet with veterinary nursing students to talk about starting in the vet nursing program. We will give priority to our assisting students to become vet nursing students. We already have multiple ways that we try to retain students once they start the program. We are investigating additional resources such as study aids to support students as well. We will work on adding as many resources as possible in the next two years. Due to seeing an increase in test anxiety, we will also make an attempt in the next two years to reduce number of exams by adding weekly assignments and quizzes. We will also increase case-based education to try and tie materials to clinical cases that represent what students will see in practice. This is a better way of engaging students.

We have already reduced costs by minimizing book purchases and using more open educational resources. We are currently working on support funding for the rabies vaccinations that our veterinary nursing students are now required to have (per the AVMA-CVTEA). This may be a deterrent to students as vaccines can cost \$1100 (for the series of two). We can't increase the pay for graduates in what has traditionally been a low paying, high burn out profession. We have been advocates for better pay when we speak with area hospitals that are hiring, and we encourage students to be good communicators regarding stresses in the workplace and do discuss healthy work habits. We did a continuing education seminar prior to the pandemic about compassion fatigue. We can present this material to all of the second year students prior to graduation. In addition, we have discussed a seminar with TMCC's counseling office on compassion fatigue. We have also discussed a seminar on how to negotiate a salary. By Spring 2024, we will have this be a regular presentation in one of our fourth semester classes.

We can not change our curriculum because of our alignment in the NSHE system with College of Southern Nevada and their Veterinary Nursing Program. We can not offer online classes and change the way we teach due to our accreditation. Creation of a hybrid program would require consultation with the AVMA-CVTEA and an additional accreditation review. We are planning on trying to accommodate students who have a far commute by offering a synchronous option to attend classes via Zoom. We have been trying to have students attend class via Zoom if they are home on quarantine (but well enough to sit in on class). Our goal is to remain an in-person full time veterinary nursing program. It has been posed whether we can accommodate students to work full time and still attend classes. No, as a professional program, we need students to attend and devote themselves to full time study for two years and gain what they need to pass the VTNE to become licensed professionals. If a student chooses to attend part time and attend classes over four years so they can work full time, yes, we are accommodating them. As noted in the demographics section, we cannot change the composition of our students. We have been talking about creating videos to post on our TMCC webpage to try to encourage recruitment and draw attention to what we do. We can focus on student diversity when selecting students to be in the videos. This will be a project we will plan on completing by the end of the Spring semester 2025 (at the latest).

In addition to these goals we will accomplish in the next five years, we will continue to be flexible and adapt to changes in our environment and future students. We could not have predicted a pandemic, but we adjusted our teaching modality, consulted with TMCC administration and the AVMA-CVTEA on a regular basis, and made adjustments so we continued to graduate successful students.

8.A. Resource Requests

Veterinary Nursing 2022-23 PUR Self-Study

Identify any resource requests. For each request, please indicate whether the request is for an additional faculty and/or staff position, capital improvements (facilities), technology or specialized instructional resources, or professional development. Address the following items:

- **Request (Additional faculty/staff, capital improvements, technology or other specialized instructional resources, or professional development)**
 - **Estimated time to hire or time the request will be made.**
 - **Projected measurable outcomes. Which PLOs and/or student success metrics does the department hope to improve as a result of the request?**
 - **Alignment to the Academic Affairs or College's Strategic Plan**

The Veterinary Technology Program started with two full time employees and has remained at this staffing level after growing into a new facility and starting a new program. At some point, it would be beneficial to add a third full time instructor. This person could have responsibility for the Veterinary Assistant Program and maintaining the clinic space at Meadowood. However, we are very fortunate to have all of our part time instructors currently including one part time instructor on an LOB contract. We wish to maintain this staffing level if we are unable to acquire

another full time employee.

Currently the two full time instructors pay for their own professional development necessary for maintaining their professional licenses. It would be helpful if the College could off-set these expenses by at least re-instituting the \$300 per year professional development supplement. Given the cost of conferences, this could be increased to at least \$500 per year. It would also be helpful for the full time instructors and key part time instructors to attend the Association of Veterinary Technician Educators annual symposium. This would enable collaboration with other programs and could benefit our program by generation of ideas at the conference. In addition, the AVMA-CVTEA strongly encourages attendance at this meeting. They noted the importance of attendance at the conference during one of our previous accreditation visits.

The funding for various issues that have come up in the program where a piece of equipment needs replacing or equipment needs to be serviced has been met by the College and different funding sources. Currently the Veterinary Nursing Program is working with the Foundation to find funding for the new mandate from the AVMA-CVTEA that all veterinary nursing students receive rabies vaccination at the start of the program. This entails two vaccinations at a cost of \$450 to \$550 per vaccination. The hope is that there will be a source of funding (donation/grant) so that the students have a lower out of pocket cost.

We will continue to monitor trends in the veterinary industry and request funds for new equipment that is necessary for the education of our students.

Academic Standards and Assessment Committee Findings and Recommendations

Veterinary Nursing 2022-23 PUR Self-Study

Veterinary Nursing PUR 2022-2023

ASA review date: 2/24/23

Self study meeting date: 4/17/23

Academic Standards and Assessment Committee's Findings:

The AAS Veterinary Nursing Program is a valuable program for TMCC based on the need for veterinary assistants and nurses both regionally and nationally as well as the high pass rate of the Veterinary Technician National Exam (VTNE). There are concerns about declining fill-rates, though FTE and section counts are stable.

Program Strengths:

- Veterinary Technician National Exam (VTNE) pass rates are high.
- The physical space and equipment are state of the art.
- All recommendations from the accrediting body have been addressed and most recommendations from the most recent PUR have been addressed.
 - Data from the US BLS support the need for veterinary assistants and technicians. No local data is available but graduates are being hired.
 - There is commendable use of affordable materials being used whenever possible.
 - FTE and section counts are stable and support program viability.

Areas of Concern or Improvement:

- Several CSLOs (e.g., VETN 125 CSLO 3) state “student will understand” which is not measurable.
- A male:female equity gap in enrollment is noted but there are no proposals to mitigate the gap.
- Course pass rates and graduation data are not analyzed for equity gaps.
- Funding is needed for repair/maintenance of big-ticket items (e.g., radiograph machines).
- Plans are presented to improve the program through recruitment, but not are not based on student success metrics.

Recommendations:

- Complete curriculum map for the Veterinary Assistant Skills Certificate.
- Regularly review program enrollment and completion for any equity gaps and develop and implement plans to mitigate any equity gaps found.
- Reevaluate CSLOs to replace “understand” with a measurable action verb.
- Work with the DRC to ensure all instructional materials are accessible.

Other comments:

Concur with Dean's Comments.

Dean's Findings and Recommendations

Veterinary Nursing 2022-23 PUR Self-Study

Academic Dean's Findings:

The Veterinary Nursing AAS program, led by Dr. Michele Noreen, is a well organized and well run program. The AAS program accepts a new cohort of students into the two-year program each fall semester, so there are simultaneous 1st year and 2nd year students each semester (fall and spring). The program has one full-time Academic Program Director, one full-time tenure-track faculty member, and shares an Admin 3 and an Admin 2 with the CNA and Phlebotomy programs. The program is fully accredited by the AVMA-CVTEA and the last site visit was February 2021. All issues noted by the site visit have been addressed and there are no outstanding issues. The previous PUR suggested upgrading facilities to be less reliant on partner locations, starting an entry level Veterinary Assistant program that could feed into the Veterinary Nursing AAS, developing marketing and promotional materials to expand student recruitment, and consider offering flexible model instruction to accommodate more students. All of these goals have been met. The program moved into renovated space at the Meadowood North campus where all skills and labs can be conducted, launched a Skills Certificate in Veterinary Assisting, produced and distributed new program flyers and attended college fairs and other promotional events, and piloted hybrid instruction and the acceptance of part-time and transfer students.

Strengths:

Dr. Noreen is an excellent program leader and manager, Instructor McMahon is a great instructor and recognized Career Champion, and they are both very committed to their students and the success of the program. They are both highly trained, involved in continual professional development, and are well-connected in the regional veterinary community. The program curriculum is well constructed and they conduct regular course and program assessment. The program has well established partnerships and externships in the greater Reno area including with UNR, Charles River Laboratories, the county shelter, and numerous veterinary hospitals and clinics. Many courses use open educational resources to reduce costs for students, students are routinely awarded scholarships from Pennington and other sources, and the three-year pass rate for the Veterinary Technician National Exam (VTNE) is 95%. There is growth in student diversity in the program, particularly among Hispanic/Latino women and in the number of men pursuing the program. The addition of the Admin 2 brings the appropriate level of administrative support to the program, the new facility is beautiful and high functioning, and the inaugural cohort of the Veterinary Assistant program met enrollment goals with 12 students.

Areas for Improvement:

The program runs best and has the best outcomes as a full-time, in-person cohort program, but the world has changed since Covid. The program has started accommodating some part-time enrollees, some transfer students from all-online programs who are not succeeding in the all-online environment, and some hybrid flexibility in content delivery. These accommodations are allowable by AVMA-CVTEA, although going fully hybrid would require additional review. I support all of these efforts and encourage their expansion to accommodate as many students as possible to become fully licensed Veterinary Technicians. I recommend the main Veterinary Nursing classroom (MDWN 172) be considered for Hy-Flex technology to accommodate this flexible teaching modality. I also encourage continued outreach to and recruitment of high school students and possible Jump Start offerings of the Veterinary Assisting curriculum.

Summary Action Recommended (Continue program(s), significantly revise, discontinue, etc. followed by explanation):

I recommend continuing the Veterinary Nursing AAS program and the Veterinary Assisting Skills Certificate.

Recommendations and Implementation Timeline:

1. Continue the Academic Program Director in Veterinary Nursing with release time support
2. Continue the Additional Assignment for the release time to coordinate the Veterinary Assisting program
3. Continue the shared Admin 2 and Admin 3 for appropriate administrative support
4. Continue using Perkins and other funding sources to support occasional large equipment expenses, since most maintenance contracts are not allowed
5. Continue allowing LOB contract for needed part-time teaching with limited part-time instructor pool and to meet required teaching ratios with live animals
6. Continue looking for ways to offset the costs to students of the rabies vaccination, including possible support from Charles River Laboratories
7. Continue to update and distribute marketing materials and attend recruitment and outreach events
8. Expand recruitment and acceptance of part-time, transfer, and high school students over the next two years

9. Explore expansion of hybrid-type instructional offerings over the next two years

Resources Necessary for Implementation of Recommendations:

1. Continue the Academic Program Director in Veterinary Nursing with release time support
2. Continue the Additional Assignment for the release time to coordinate the Veterinary Assisting program
3. Continue the shared Admin 2 and Admin 3 for appropriate administrative support
4. Continue rotational allocation of Perkins funding and other resources for equipment
5. Continue allowing LOB contract
6. Possible grants or lab fees or other supports, including possible support from Charles River Laboratories
7. Funding for marketing materials
8. Expand collaborations with Jump Start and CTE Coordinator
9. Possible installation of Hy-Flex technology in MDWN teaching space

Impact of Recommendations on Division Planning:

The reduction in overall Perkins funding requires additional coordination across the Division and the college to prioritize support for CTE programs and equipment, as well as exploration of other funding sources such as grants and industry support.

Impact of Recommendations on Program/Unit Faculty:

Without the continued support of positions listed above (#1, #2, #3, and #5) there would be significant negative consequences to the program as there would not be enough administrative, instructional, and managerial support to effectively maintain the programs.

Vice President of Academic Affairs' Findings and Recommendations

Veterinary Nursing 2022-23 PUR Self-Study

VPAA's Findings and Conclusions:

(Include which of the ASA Committee's and Dean's findings and recommendations were upheld or not upheld.)

This PUR was a pleasure to read. The outcomes are testament to Dr. Noreen's leadership and the care that she and her team have for this program and their students. The efforts to remedy the deficiencies pointed out in early 2021 are significant and the results speak for themselves. The pass rates are very high and the program exhibits a genuine esprit de corps.

Strengths:

The program's strengths begin with its leader, Dr. Noreen, and extend throughout its teaching and support staff. The facilities are first-rate, and the support from regional vets is evident in the long list of MOUs that was just recently renewed. The graduates are clearly very well prepared to enter the workforce and the program merits such respect that these hires will fare very well. The program has strong enrollment this Fall.

Areas for Improvement:

I can see none, aside from continuing to diversify the student body and the instructor ranks, if possible. The program's graduation ceremony is always a treat to attend. This program should be featured more prominently in our college's social media channels. I suggest inviting Barrie Fenton from MCO to attend labs and events, for the photo ops will surely be very impressive and garner lots of attention online.

Recommendations and Next Steps for the Program Based on the PUR:

(Include whether the program should be continued, significantly revised, or discontinued, followed by a rationale.)

Absolutely continue this program. I concur with the Dean's recommendation that the program work with WCSO to identify dual-credit opportunities. Our emerging 'Bridge to TMCC' program for HS CTE students could be a fine avenue for this.

Resources Needed to Implement Recommendations Towards Program Improvement or Enhancement:

The VPAA recently supported the purchase of an x-ray machine, and is standing by to review other needs as they arise.