

COLLEGE OF SOUTHERN NEVADA
PROGRAM REVIEW

Department of Health Related Professions

Veterinary Technology
Associate of Applied Science

Spring 2019

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Mission Statements

CSN

The College of Southern Nevada creates opportunities and enriches lives with inclusive learning and working environments that support diversity and student success. The College fosters economic development, civic engagement, and cultural and scientific literacy, while helping students achieve their educational, professional, and personal goals.

Veterinary Technology

The Veterinary Technology Program of CSN strives to prepare students with sufficient knowledge to enter the profession of Veterinary Medicine by providing quality didactic and practical learning experiences.

The Veterinary Technology program is part of the fulfillment of the mission of the College of Southern Nevada in that it is one of the opportunities that has been created to enrich the lives of students with an interest in the field of veterinary medicine. This opportunity exposes students to current and evolving knowledge, as well as practical experience in the field that will allow them to obtain nationally recognized credentials as veterinary technicians (nurses). As program students reach their goals, individual communities and the State of Nevada benefit by having new veterinary professionals enter into the work force and contribute to economic development as well as the public well-being through health care of companion and production animals.

Nature of Work

A licensed veterinary technician's duties are those of a veterinary nurse, nurse-anesthetist, operation room technician, dental hygienist, medical laboratory technician, and radiology technician. A graduate of this program may sit for the Veterinary Technician National Exam (VTNE) and Nevada Veterinary Technician exam.

Veterinary technicians provide professional support services to veterinarians. A licensed veterinary technician's duties are those of a veterinary nurse, nurse-anesthetist, operating room technician, dental hygienist, medical laboratory technician, and radiology technician. The veterinary technician also performs administrative duties pertaining to the practice's management. Career fields for a licensed veterinary technician may include:

- Private Animal Clinical Practice
- Specialty Practice
- Zoo Medicine
- Food Production
- Wildlife Rehabilitation
- Research / Lab animal
- Military
- Education
- Government (USDA)
- Industry Sales
- Clinical Laboratory

Salary is highly variable depending on disciplinary focus of the technician. Entry level salary for a technician in small animal practice ranges from approximately \$25,000 to \$48,000/year. Whereas salary for technicians in industry, research, teaching or other disciplines is commensurate with experience and job requirements.

Program Advising

The current advising sheet regarding prerequisites, general education courses, and program courses is attached.

VETERINARY TECHNOLOGY

Associate of Applied Science (74 Credits)

For Students Seeking Admission to the Fall 2019 Program

The Limited Entry Office will be responsible for managing the application process and the selection for students will be performed by an admissions committee.

Qualified applicants must:

- Complete a Health Programs Orientation, meet with a Health Programs Advisor, and complete a Limited Entry Workshop (within 2 years)
- Have either a High School Diploma, High School Transcript or GED equivalent
- Have a grade of "C" or better for all Science and Math courses
- Have a minimum cumulative GPA of 2.0 or better for program prerequisites

Applicants will be ranked and selected using a point system through which points will be awarded. Please see attached Selection Criteria sheet.

PROGRAM PREREQUISITE COURSES: These are courses that must be completed before a student is considered eligible for entry into the Program.

FOR SELECTION PURPOSES, PREREQUISITE COURSES FOR LIMITED ENTRY PROGRAMS MAY BE ATTEMPTED THREE TIMES. ALL ATTEMPTS INCLUDE WITHDRAWS, AUDITS AND GRADES. THE HIGHEST GRADE WILL BE USED FOR THE GPA CALCULATION.

Course	Title	Cr	Gen Ed Req.	Tech Prep	Min. Grade
BIOL 189	Fundamentals of Life Science	4	Science	No	C
MATH 116 or higher (Except MATH 122 & 123)*		3	Math	No	C
ENG 101 or 107		3	English	No	C
		Total 10 Cr			

ADDITIONAL GENERAL EDUCATION REQUIREMENTS:

Communications**:	3 cr
U.S. & Nevada Constitution**:	4 cr
Social Sciences/Humanities**:	3 cr
Human Relations**:	3 cr
Science: BIOL 251	4 cr
Total	17 cr

*MATH 100 can be substituted for the math requirement.

**See AAS degree requirements in College Catalog.

IMPORTANT POINTS TO REMEMBER:

- Selection Occurs: Once a year
- Program Begins: Fall 2019
- Application Deadline: **June 1, 2019**
Applications received after the Application Deadline will only be considered if space permits. Proof of completion of all program prerequisites must be in the Limited Entry office by this date.
- Maximum number of students admitted: **20**
- Science courses must be no more than 7 years old at the time of entry into the program.
- High school Diploma or GED required for licensure

PROGRAM COURSES: These are specialized courses within a health-discipline. They are restricted to students who have been accepted into the program. Program courses are subject to revision; this will not impact program admission.

1 st semester	2 nd semester	3 rd semester	4 th semester
VETT 101B....1cr Introduction to Animal Health Technology	VETT 112 B....4cr Clinical Anatomy and Physiology II	VETT 205 B....2cr Diagnostic Imaging	VETT 225 B....2cr Pharmacology and Toxicology
VETT 105 B....1cr Veterinary Medical Terminology	VETT 127B....4cr Basic Animal Nursing	VETT 211 B.... 2cr Animal Nutrition	VETT 235B ... 4cr Surgical, Anesthesia and Dental Procedures
VETT 110 B.... 4cr Clinical Anatomy and Physiology I	VETT 203B....4cr Clinical/General Pathology	VETT 227B... 4cr Advanced Animal Nursing	VETT 240 B...2cr Large Animal Procedures
VETT 125B.... 2cr Veterinary Office and Clinic	VETT 208B... 2cr Lab Animal Science and Exotics	VETT 260B... 2cr Directed Clinical Practice I	VETT 265B.... 2cr Directed Clinical Practice II
	VETT 209B.... 1cr Parasitology	VETT 230B...1cr Principles of Asepsis	VETT 250B...3cr Critical Care/ ER
Total semester...8cr	Total semester...15cr	Total semester... 11cr	Total semester... 13cr
			Total In-Program Credits 47

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Selection Criteria

The Veterinary Technology program is a limited entry program and as such entering students receive a point allocation based on completion and performance of selected criteria related to degree completion and profession related activities. The selection criteria for students desiring acceptance into the program is attached.

Veterinary Technology - **ASSOCIATE DEGREE PROGRAM** Selection Criteria Fall 2019

I. Program Prerequisite GPA

4.0	5 points	_____
3.5 - ≤ 3.9	4 points	_____
3.0 - ≤ 3.4	3 points	_____
2.5 - ≤ 2.9	2 points	_____
2.0 - ≤ 2.4	1 point	_____

Subtotal _____

II. BIOL 189

4.0	5 points	_____
3.5-≤3.9	4 points	_____
3.0-≤3.4	3 points	_____
2.5-≤2.9	2 points	_____
2.0-≤2.4	1 point	_____

Subtotal _____

III. Animal Related Work/Volunteer Experience*

Medical related

> 5 yrs	12 points	_____
4 - < 5 yrs	10 points	_____
3 - < 4 yrs	8 points	_____
2 - < 3 yrs	6 points	_____
1 - < 2 yrs	4 points	_____
< 1 yr	1 point	_____

Subtotal _____

Non-Medical

> 5 yrs	12 points	_____
4 - < 5 yrs	10 points	_____
3 - < 4 yrs	8 points	_____
2 - < 3 yrs	6 points	_____
1 - < 2 yrs	4 points	_____
< 1 yr	1 point	_____

Subtotal _____

***The Animal Related Work/Volunteer Experience Documentation Form is available online at <https://at.csn.edu/sites/default/files/documents/vt-experience.pdf> (click on "Animal Related Experience Documentation Form")**

IV. Previous Education

• Masters Degree	12 points	_____
• Bachelors Degree	8 points	_____
• Associate Degree	4 points	_____
• 1 semester**	0.5 point	_____

**** (Minimum of 12 credits)**

(Credits do not have to be taken in one semester)

Subtotal _____

V. Completion of Gen Ed Courses

• Communication	2 points	_____
• USNV constitution	2 points	_____
• Soc Sci/Humanities	2 points	_____
• Human Relations	2 points	_____
• Science: BIOL 251	2 points	_____

(Courses must be completed with a "C" or better)

Subtotal _____

Selection criteria (cont.)

Veterinary Technology - **ASSOCIATE DEGREE PROGRAM** Selection Criteria Continued Fall 2019

VI. Reapplying Students (students who are reapplying following a withdrawal/dismissal for academic reasons):

- 1st reapplication = 2 point deducted
- 2nd reapplication = 4 points deducted
- 3rd reapplication or more = 6 points deducted

***Note:** Point Deduction does not apply to first time applicants or applicants who were not accepted and are now reapplying.

Subtotal _____

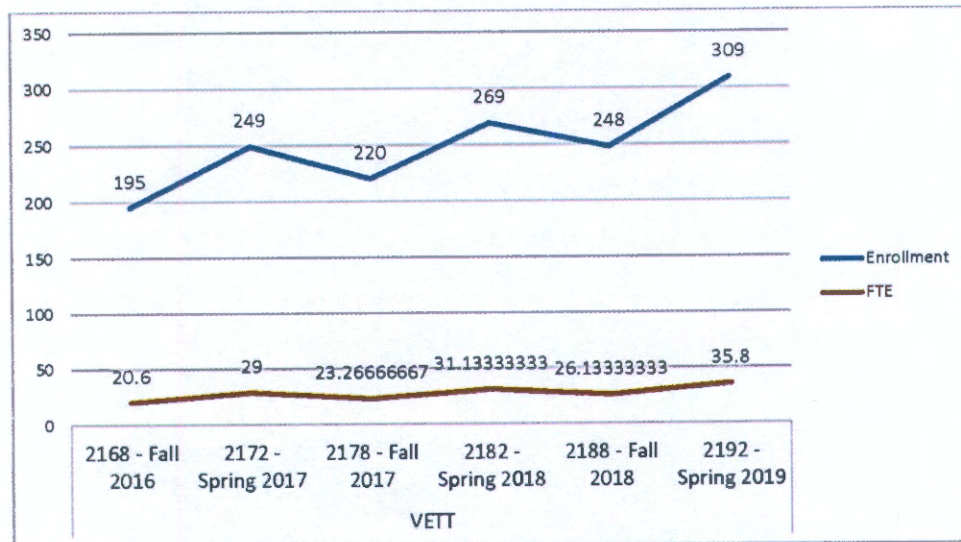
VII. TOTAL POINTS

TOTAL _____

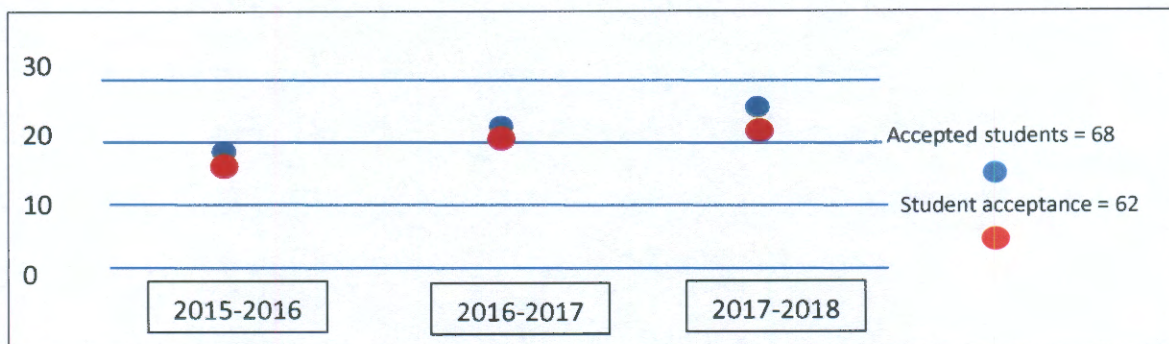
Institutional Research

Data sets for academic appraisal, along with summaries of each data set, are provided in the tables that follow. All data sets were provided to the Department by the Office of Institutional Research (IR).

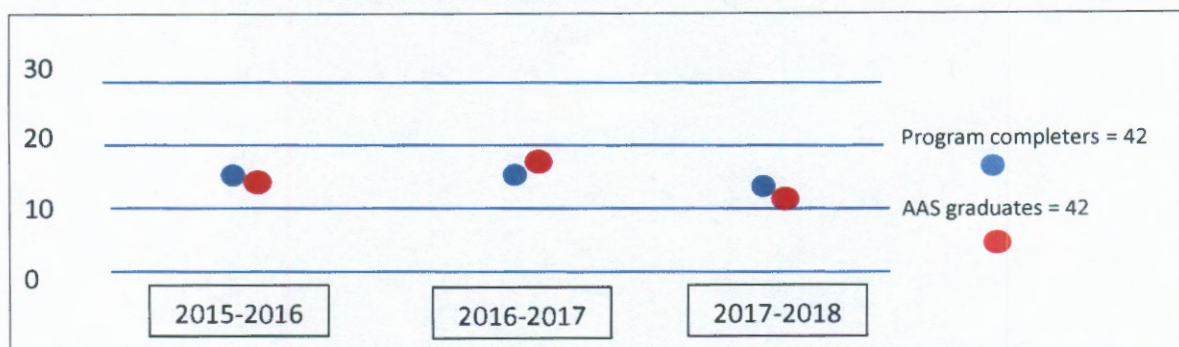
The data in the following table reflects student interest in the program based on numbers that declare, at enrollment in CSN, pre-veterinary technology and veterinary technology as intended majors for the last 3 years (top line [blue]). This data shows an increasing interest over the last three years. This table also shows actual FTE numbers for the same period. As this is a limited entry program, interested students and actual admitted students are not the same and students able to enroll are significantly lower.



The next table exhibits the number of students accepted into the program for the last three years along with the number of students that actually accepted the seat offered. As indicated the number of student accepting the offered seat is somewhat lower than students accepted by the program. The reasons for the difference is variable and include failure to pass the mandatory drug screening, simultaneous acceptance into a different program, and major life changes such as moving to a different state.



The following table indicates the number of students that have completed the program in the last three years and the number of students that have graduated with the AAS in Veterinary Technology. This number is often different because there are student that do not complete all general education requirements prior to completing the program requirements. This leads to some students graduating with the AAS degree later than completing the program.



The data indicates that there is an increasing demand for the program from an interested, potential student perspective and this translates into a slight increase in the FTE over the same period. One reason is admitting a cohort size just over the published capacity. During each of the last three years the number of students that have essentially identical admission points as dictated the request to the administration to allow an increase in the number. This may be a reflection of the value of the program to the community as well as potential employers.

Additional statistical information is provided in the External Validation section in the biennial report to the AVMA – CVTEA.

Faculty Profiles

Full-time

Dennis Olsen, DVM MS, Diplomate, ACVS

Dr. Olsen has been the director of the Veterinary Technology program since the fall semester of 2002. Prior to coming to CSN he taught veterinary surgery at Kansas State University, Virginia Polytechnic Institute and State University, the University of Georgia, and Colorado State University. He graduated from the Oregon State University College of Veterinary Medicine in 1986 and for six years practiced general veterinary medicine and surgery. He completed a surgical residency and Master's Degree in Clinical Sciences from Colorado State University in 1995. He became a diplomate of the American College of Veterinary Surgery (clinical Ph.D.) in 1996. He also has two Bachelor of Science degrees, one from Washington State University in Clinical Sciences and one from Weber State University in Zoology. Dr. Olsen is classified as an instructor at CSN. He serves as the CSN attending veterinarian and is an *ad hoc* member of the Institutional Animal Care and Use Committee. Additionally he serves on the CSN scholarship committee and has been a judge for multiple Nevada HOSA-Future Health Professionals competitions. He is currently a member of the editorial review board for Veterinary Surgery, the Journal of the American College of Veterinary Surgeons and European College of Veterinary Surgeons. He serves as the coordinator of the surgical section of the Clinical Proficiency Examination for the American Veterinary Medical Association's Educational Commission for Foreign Veterinary Graduates. He coordinates technical assistance for the yearly convention of the Western Veterinary Conference (WVC) and has presented various small animal surgery lectures and 'hands-on' laboratories for the same conference. The WVC presented him with the Meritorious Service award in 2014. He also serves currently as a member of the Clark County Medical Reserve Corp. Dr. Olsen has initiated a cooperative medical and surgical learning experience for CSN students. Not just those in the veterinary technology program but for other medically related programs. Students are able to accompany and assist him as he performs surgery at referring veterinary hospitals and at the CSN Veterinary Nursing Teaching Clinic. Students from the Surgical Technology program are able to assist in actual surgical procedures in the teaching clinic during their time in the program. Dental Hygiene students are able to observe veterinary dental procedures on horses, dogs, and cats. Students in the Veterinary Technology program are able to learn about ultrasound physics and scanning from the faculty of the CSN ultrasonography programs in laboratory and actual clinical situations on veterinary patients. Students in the Emergency Medical Service program are able to practice endotracheal intubation on living patients as they participate in laboratories where the veterinary technology students are gaining experience in anesthesia and surgical assisting at a local low-cost spay and neuter facility. In this manner students gain invaluable experience at the same time they provide a service to the people and the city of Las Vegas and Clark County. Students in Radiation Therapy are able to gain valuable experience in the use of functional x-ray, fluoroscopy, and computed tomography machines.

Aubree Englert, BS, LVT

Ms. Englert has been teaching in the Veterinary Technology program since the fall of 2010. She was granted tenure in the spring of 2014. Prior to beginning at CSN she worked as a veterinary technician at the Western Veterinary Conference and VCA Hualapai Animal Hospital. Ms. Englert received a Bachelor of Science degree in Biology

and Zoology from Colorado State University in 2007. She then attended CSN and obtained an AAS in Veterinary Technology. She obtained a license to practice as a veterinary nurse in 2010. She has served on the CSN Institutional Animal Care and Use Committee since 2010 and an *ad hoc* member of the Veterinary Technology Advisory Committee. Other service to CSN includes the Travel Committee from 2013 to 2014, Safety and Security from 2018, and the Tenure Committee from 2016. She is very active in the collaborative efforts set up to allow students from Veterinary Technology and different programs in Health Sciences to gain valuable experience using the resources afforded the Veterinary Technology program. She is the head nurse in the CSN Veterinary Nursing Teaching Clinic. She has also been active in procurement of grants to obtain equipment and supplies for the program. She is a member of the Local Equine Assistance Network, an instructor at Noah's Animal House, technical assistance supervisor at the annual convention of the Western Veterinary Conference, and supervises educational booths at various civic events for the Student Chapter of the National Association of Veterinary Technicians in America. She is a member of the National Association of Veterinary Technicians in America, the association of Veterinary Technician Educators, the Nevada Veterinary Technician Association, and the Colorado State Alumni Association.

Part-time

Jerome Goldsboro, DVM, Diplomate, ACLAM

Dr. Goldsboro began as a part-time instructor at CSN in 2004. Prior to coming to CSN he was the head of Laboratory Animal Medicine at the Boston University Medical School for 7 years. Prior to that he was the Laboratory Animal Veterinarian at the School of Veterinary Medicine at the University of Illinois from 1986 to 1995. As a military veterinarian he was at the Letterman Army Institute of Research and the veterinarian for NASA from 1977 to 1985 and at the Naval Medical Research Unit in Taipei, Taiwan from 1974 to 1977. Dr. Goldsboro graduated from Tuskegee University as a Doctor of Veterinary Medicine in 1964 and became a Diplomate of the American College of Laboratory Animal Medicine in 1974. Dr. Goldsboro was awarded Part-time Instructor of the Year for CSN in 2012. In addition to teaching at CSN, Dr. Goldsboro is an examiner for the Clinical Proficiency Examination for the American Veterinary Medical Association's Educational Commission for Foreign Veterinary Graduates. He assists with CSN student supervision as they participate as technical assistants in 'hands-on' laboratories at the annual convention of the Western Veterinary Conference.

Vanessa Cook, MA, VetMB, MS, PhD, Diplomate, ACVS, Diplomate, ACVECC

Dr. Cook has been a part-time instructor at CSN since 2017 and teaches Veterinary Emergency and Critical Care. Prior to coming to CSN she was an Associate Professor at Michigan State University since 2011. She graduated as a veterinarian from Cambridge University in the United Kingdom in 1992 and received a Master's degree, also from Cambridge, in 1993. She completed a surgical residency and received a Master's degree from The Ohio State University in 1997. She became certified as an equine surgeon and became a Diplomate of the American College of Veterinary Surgeons in 1998. She also became a Diplomate of the American College of Veterinary Emergency and Critical Care in 2004. She received a Ph.D. in Physiology from North Carolina State University in 2008. In addition to being a part-time instructor at CSN she is also an examiner in the equine section for the Clinical Proficiency Examination for the American Veterinary

Medical Association's Educational Commission for Foreign Veterinary Graduates. Dr. Cook has authored or co-authored five peer reviewed veterinary journal articles in the past five years. These publications are included in the Equine Veterinary Journal, Veterinary Immunology and Immunopathology, the Journal of Veterinary Emergency and Critical Care, and Veterinary Clinics of North America: Equine Practice. She is an award winning educator and has been selected as Equine Speaker of the Year in 2018 by the Western Veterinary Conference and as the Zoetis Equine Educator of the Year by the Veterinary Emergency and Critical Care Society. She has received grants as an investigator to study the effects of Flunixin and Firocoxib (NSAID drugs) in postoperative equine colic patients and the gastrointestinal permeability in obese horses.

Krista Eicher, AAS, LVT

Ms. Eicher is a newly hired part-time instructor for the program and teaches laboratory sections of Veterinary Clinical and General Pathology and Basic Animal Nursing. She graduated from the CSN Veterinary Technology program with an Associates of Applied Science degree, successfully completed the national certification examination and obtained a license to practice in 2004. She has excelled as a licensed veterinary nurse for 16 years at one of the premiere private practices in Las Vegas. She has worked with the only board certified veterinary dental specialist in Las Vegas at that practice which is one of the affiliates of the CSN Veterinary Technology program.

Non-teaching

Melissa Schalles

Ms. Schalles is currently the Manager of the College of Southern Nevada's Teaching Clinic. She originally started as an instructor at CSN in 2005 and when the CSN Veterinary Nursing Teaching Clinic was instituted in 2009, she became the manager. Prior to coming to CSN she practiced as a veterinary technician at Rainbow Animal Hospital from 2002 to 2005. Ms. Schalles received a Bachelor of Science in Animal Science from Colorado State University in 1998 and became licensed as a veterinary technician in Nevada in 2002. She received a Master's degree Educational Leadership from UNLV in 2008. Ms. Schalles serves as the Chair of the CSN Institutional Animal Care and Use Committee. She is very active in helping manage program student participation in CSN Veterinary Nursing Teaching Clinic and specialty rotation assistance with the Program Director when surgical procedures are performed. She also participates as a clinical nurse in the CSN Veterinary Nursing Teaching Clinic. She is active in assisting with grant procurement and she coordinates employer and graduate surveys.

Student Information and Assessment

Student Profile

Students accepted into the Veterinary Technology program must go through a limited entry application process. Prior to application students must complete three program prerequisites that include a math course (104 or above), a science course (BIO 189), and an English course (ENG 101). The required GPA for prerequisite courses is 2.0. Student acceptance potential is further enhanced as they complete the general education requirements for the Associate of Applied Science degree. Points are assigned for the courses they complete. Performance in the courses, prerequisite or general education, is also evaluated as a criteria for acceptance into the program. The grade point averages for the science courses and the overall general education courses are determined and points are assigned for that performance. Applicants are also awarded points for previously obtained college degrees or semesters of college attendance, previous experience in the field of veterinary medicine and/or animal related work experience. The applications are evaluated by the faculty of the program, limited entry office staff members, and school and department representatives. Applications are evaluated for completeness and points are assigned via a predetermined scoring system. Students must attain a 'C' (70% score) in each class in order to pass program courses and successfully complete the program. The average GPA for the program courses must be at minimum a 2.0. Program prerequisite and science courses must also have a 2.0 GPA for admittance as mentioned above. The Associate of Applied Science degree has 74 credit hours required, 27 for the general education requirements and 47 for program specific courses.

Program completers

Many students that complete the program are hired as veterinary technicians-in-training before they actually complete the course work and virtually 100% that seek employment are hired into the field after completion. Four students that have completed the program have gone on to Colleges of Veterinary Medicine and have or soon will receive a Doctor of Veterinary Medicine degree.

Student Learning Outcomes

Student learning outcomes have been established that incorporate much of the practice of veterinary nursing. The outcomes reflect the potential for success in obtaining the proper credentials to practice as well as success in the performance general practice duties and eventual advancement in the field. The learning outcomes are:

1. Demonstrate competencies necessary to pass the national and state board examinations for veterinary nurses.
2. Demonstrate entry level competency as a veterinary nurse.
3. Demonstrate skills and abilities to pursue managerial opportunities after obtaining sufficient clinical experience.

Measurement of Learning Outcomes

Learning outcomes are evaluated by various means. The first measurement method is the use of an Essential Skills log that is required by the AVMA-CVTEA and is monitored by the accrediting body committee. This log has approximately 290 included nursing skills and a minimum of 90% of the total must be verified by authorized personnel as having been met at an entry level of

competency. Of the 290 skills, there are selected skills that are required to be within the 90% completion category. Each skill has an enumerated procedure list that must all be completed for successful accomplishment. Original verification of those skills deemed required can be rescinded if future performance indicates less than adequate retention of the required skill and the student must repeat the verification process. Students meet with an assigned faculty advisor and the clinical manager to review the progress towards completion of the skills log twice during the final two semesters. Inadequate progression prompts creation of a plan to aid the student attain the required verifications prior to the deadline of the week before graduation.

The next measurement of student outcomes is the Clinical Competency Test given in the capstone course VETT 265 of the final semester. This is a clinical simulation examination that is designed to encompass many of the basic and general skills required as a veterinary nurse. Students are individually presented a clinical case scenario and progress through the case from initial presentation to the discharge of the case. Students must ask for pertinent information to be able to progress through the case levels to attain scores. Proper performance in one aspect will lead to the subsequent information and skills to be performed. Faculty members function as clients, nursing supervisors, laboratory assistants and doctors of veterinary medicine during this case simulation test. If students are not successful in the first attempt a second attempt is afforded before program completion.

Each course is evaluated as is appropriate throughout the program through didactic examinations, laboratory examinations, and skill performance evaluations. Students are given study objectives and information about potential evaluation content. They are however blinded as to the actual content at the time of the examination.

Academic Quality

Each year faculty members are evaluated by their immediate supervisors as to the delivery of academic material. Faculty members are observed during delivery of either lecture or laboratory materials. In all cases during the last five years the evaluations have been positive and constructive suggestions are offered.

Each year the course content is evaluated by the faculty members and updated as to content and relevancy by acquiring new text book additions and pertinent veterinary publications. The academic quality is also monitored by the AVMA-CVTEA accreditation committee at the scheduled site visits and during the scheduled interim reports that are submitted. (8)

Curriculum Information

Strengths

The program curriculum is designed to be easily updated as knowledge increases. The Veterinary Technician National Examination (VTNE) is offered three times per year for one month periods. The current three year pass rate for the Veterinary Technician National Examination is 77%. This is above the national average. At the most recent testing period CSN had 100% pass rate and the first time takers average scores for each section of the exam were between 10 – 20% above the national average. The Clinical Competency Test pass rate for 2018 was 94.4%. Contributing to curriculum strength is the interrelation with the clinical affiliations that augments the didactic and laboratory learning. There are 13 sites that cooperate with CSN in delivering clinical experiences to the students. The Western Veterinary Conference (WVC) affiliation is unique in the United States for veterinary technician programs. In this affiliation CSN faculty are able to supervise students directly and utilize the staff of the WVC to augment the opportunity. In this arrangement, veterinarians from across the country participate in a monthly Clinical Proficiency Examinations for veterinarians desiring licensure in the United States and the CSN students act as nurses to the doctors. In this way the students are given access to some of the premiere veterinary specialists to gain experience and knowledge. Additionally, each year the WVC convenes the largest convention for veterinarians in the world and the CSN program students are given the opportunity to assist in 'hands-on' laboratory exercises to gain additional experience as well as given a complimentary registration to attend all aspects of the convention. In this way students are given access to any aspect of veterinary medicine and surgery to again augment their learning. The remaining affiliations are limited to unique locations where specialists in various fields help deliver some of the most up-to-date information and provide experiential learning that complements the didactic curricular offerings.

Another augmentation to the curricular strength is the program advisory board and the accreditation process. Curriculum is evaluated by both entities and recommendations are provided for improvement. Curriculum must meet the standard established by the AVMA-CVTEA in order for continued accreditation. CSN has been fully accredited since 2006.

Analysis

Currently, the CSN Veterinary Technology program is subject to biennial reporting to the AVMA-CVTEA and a site visit by members of the accrediting board every six years. The curriculum is critically assessed during these reports and site visits. There are minimum standards that must be met in regards to curriculum content and required equipment / technology. When standards are not met there are warnings delivered with time limits established to meet those minimum standards. Non-compliance results in a downgrading of accreditation to probationary status and potential withdrawal of accreditation. A copy of the curriculum standards for accreditation by the AVMA - CVTEA is attached:

10) Curriculum

10a. The curriculum must prepare graduates who will be fully capable of performing in a wide variety of professional roles within the veterinary field. At the completion of the curriculum, graduates must have attained entry-level skills needed to support companion animal, equine, and food animal practice, biomedical research, and other veterinary medical activities. The curriculum shall provide a foundation in veterinary technology that will prepare the student to successfully become credentialed and inspire the student to continue life-long learning.

10b. The specific courses shall teach basic medical science, communication, critical thinking, decision-making, and clinical application skills. Integration of nursing, technical, and medical skills within the curriculum must use live animals. Whenever possible, animal nursing skills should be developed in a setting and under conditions that are a reflection of the manner in which graduates will use these skills.

10c. The curriculum must include general education and specific veterinary technology course content. Required materials can be offered as complete course offerings or be integrated into courses involving more than one area of recommended material. Course objectives must be clearly communicated to the student through syllabi or other course documents. Course offerings to meet curriculum requirements must constitute a minimum of 60 semester credit hours (or equivalent).

GENERAL COURSE MATERIAL:

- Applied mathematics
- Biological science
- Communication skills
- Fundamentals of chemistry

SPECIFIC COURSE MATERIAL:

- Anatomy and physiology
- Anesthesia, including induction, monitoring, and instrumentation
- Animal husbandry, including restraint, behavior, species and breed identification, reproduction, sex determination, and human-animal bonding
- Biosecurity-safety and security issues
- Clinical pathology and parasitology
- Communication/Interaction skills with clients and colleagues
- Diseases, preventive medicine (including dentistry), and nursing of companion animals, food-producing animals, horses, exotic species, and laboratory animals
- Economics in veterinary practice
- Ethics, professionalism, and legal applications in veterinary medicine
- Humane animal care and management
- Introduction to laboratory animal medicine
- Life-long learning concepts
- Medical terminology
- Microbiology and immunology
- Necropsy techniques
- Nutrition and principles of feeding
- Orientation to the profession of veterinary technology
- Pharmacology for veterinary technicians
- Principles of imaging, including radiography and ultrasonography
- Safety Issues, consistent with the CVTEA *Statement on Safety* with course work emphasis on zoonoses and occupational safety (see Appendix A).
- Surgical nursing and assisting, including instrumentation
- Technician utilization and team concepts of health care delivery
- Value of professional organizations
- Veterinary office management and elementary computer skills

10d. Practical veterinary experience that expands student knowledge and builds proficiency of acquired skills through task-specific exercises is a required portion of the curriculum. These experiences are usually termed preceptorships, practicums, internships, or externships. Practical experiences are for the purpose of honing skills learned in formal instructional settings and should be scheduled to occur following completion of skills acquisition. These practical experiences should be a minimum of 240 cumulative contact hours and must be monitored by the program director or the director's appointee who must be a program faculty or staff member. Prior to the beginning of the practical experience, on-site supervisors must be contacted by the program. Students and faculty should seek progressive contemporary facilities that employ credentialed veterinary technicians to act as professional role models and mentors. During the practical experience, contact must be maintained with students and their on-site supervisors to monitor students' personal and educational experiences. It is highly recommended that such contact take place through personal visits and interviews by the program director or appointee. Specific criteria must be used to assist on-site supervisors in monitoring student progress. The program director or appointee shall review student performance evaluations by on-site supervisors, student evaluation of the experiences, and a final student performance evaluation.

10e. Successful completion of all required skills found in the *Veterinary Technology Student Essential and Recommended Skills List, Appendix I* must be evaluated and documented by

program personnel who use standard criteria that reflect contemporary veterinary practice. Program personnel should be a credentialed veterinary technician or veterinarian. Program personnel must have a signed agreement with the parent institution, complete training in evaluating essential skills, and regularly communicate with the program director. This agreement is in addition to any facility MOU required per Appendix C.

10f. The CVTEA recognizes that a program may wish to emphasize certain areas within the curriculum to capitalize on regional variation, institutional strengths, and available job markets. This emphasis should be clearly stated in the mission statement/objectives of the program, and the curriculum shall then reflect that emphasis. A choice to emphasize one aspect of the curriculum must not interfere with the acquisition of all skills listed on the *Veterinary Technology Student Essential and Recommended Skills* list (Appendix I).

10g. The CVTEA recognizes that academic institutions have the inherent right to accept credits from other colleges, universities, recognized educational entities, or prior learning. However, if the program accepts veterinary technician-related course credit from institutions not accredited by AVMA CVTEA, the program must ensure that the rigor of transfer courses meets CVTEA Standards. Provision of prior learning must include documentation or critical evaluation of these experiences to award college credit or advanced standing. Documentation of the assurance may be requested for review during the program accreditation process.

10h. At times, accredited programs are requested to give credit for high school courses with titles similar to those required for graduation from a CVTEA-accredited program. If credit is to be given for such courses, the student must first be required to demonstrate to veterinary technology program faculty a level of competency comparable to that of students who complete the required course successfully.

The minimum standards regarding the equipment and technology is also attached.

INSTRUCTIONAL EQUIPMENT

- *Camera

- *Computer

AUDIOVISUAL

- *Presentation system including software

- *Video recording and viewing equipment

SPECIMENS, MODELS

- *Large animal skeleton/limbs

- *Dog or Cat skeleton

CLINICAL EQUIPMENT

- *Anesthesia machine

- *Isoflurane

- *Non-rebreathing system

- *Waste anesthetic gas exhaust system

- *Animal gurney or stretcher

- *Autoclave

- *Bandaging/casting material

- *Bathing equipment

- *Blood pressure monitoring equipment

- *Cages complying with federal regulations

- *Capnometer

- *Cardiac monitor

- *Controlled drug cabinet

- *Dehorers

- *Dental instruments – large animal—dental floats

- *Dental instruments – Dog or Cat—ultrasonic scaler and polisher including appropriate hand instruments

- *Electric clippers

- *Electrocardiograph

- *Emasculator

- *Emergency supplies and equipment with accessible emergency drugs and dosages (including, but not limited to, assorted endotracheal tubes, resuscitation bag, assorted intravenous catheter sizes, epinephrine, atropine, lidocaine, face mask(s), stethoscope)

- *Endotracheal tubes

- *Esophageal stethoscope

- *Examination tables

- *Fluid Pump

- *Hoof trimmers and picks

- *Microchip Scanner

- *Nail trimmers

CLINICAL EQUIPMENT (cont.)

- *Ophthalmoscope

- *Laboratory Animal

- *Large animal

- *Dog or Cat

- *Oral speculum-dog or cat

- *Orthopedic equipment

- *Otoscope

- *Pulse Oximeter

- *Scales, animal

- *Stethoscope

- *Surgical instruments, basic

- *Surgical lights

- *Surgical tables

- *Syringes, multiple dose

- *Temperature monitoring device

- *Tonometer

- *Tourniquet

- *Tubes – feeding and gavage

- *Vaginal speculum

- *Warming devices

RESTRAINT EQUIPMENT

- Laboratory Animal

- *rodent

- Large animal

- *Cattle chute

- *Twitch

- *Ropes

- *Halter

- Dog or Cat

- *Elizabethan collar

- *Restraint pole

- *Muzzle

LABORATORY EQUIPMENT

- *Centrifuge

- *Clinical chemistry analyzer

- *Manual blood cell counter

- *Electronic blood cell counter

- *Hand tally cell counter

- *Incubator

- *Microhematocrit centrifuge

- *Microscopes

- *Refractometer

RADIOGRAPHIC IMAGING

- *Aprons & gloves, protective

- *Calipers

- *Cassette holders

- *Film identification markers

- *Lead eyeglasses

- *Protective thyroid collar

- *Radiation safety badges

- *Storage racks for gloves/aprons

- *X-ray machine – fixed

- *X-ray machine – portable

- *X-ray – dental

Weakness Management

When weaknesses or deficiencies in the curriculum are identified by faculty, the advisory board, or the AVMA – CVTEA the faculty member that is responsible for the particular area immediately searches for updates in the current literature. This includes new editions of textbooks, new and pertinent journal publications, and alternative textbooks. Once alternatives are located the information is updated both didactically and for laboratory exercises.

If curriculum management requires course alteration to mitigate the deficiency then the advisory board is consulted to discuss the advisability of any proposed changes. Following discussion and incorporation of acceptable concepts, proposals are submitted to the CSN curriculum committee for consideration and potential adoption.

Weakness or deficiencies in equipment / technology is addressed immediately if program budgetary resources allow procurement of the new equipment. When the program budget is inadequate then alternatives are sought such as CSN equipment grants, federal grants such as Perkins, and philanthropic sources.

Information, Technology Space and Equipment Resources

Library Resources

The Library System of CSN is very supportive of the Veterinary Technology program. Currently, there are 18 databases that have veterinary medicine related content. There are two databases with video presentations that include species specific veterinary content and veterinary procedural content. There is one journal database that is specific to veterinary medicine. There are 18 electronic textbooks and 722 hard copy textbooks that are considered veterinary specific and more than 15,000 medically related titles. In addition to the library holdings the library personnel are very amenable to assisting the veterinary technology program students and staff. They have provided guided presentations to student classes and have been very helpful during accreditation site visits and interim reporting.

Computing Resources

Computer laboratories are strategically placed throughout the CSN West Charleston Campus with locations in the 'B', 'C', and 'K' buildings. The five veterinary specific computers and software are located in the 'B' building within the veterinary specific classes and clinical areas. These computers contain the veterinary specific software that is essential in clinical management and integration with clinical equipment, running clinical equipment such as radiology units, the CT scanner, endoscopic equipment, and providing access to the databases in the CSN library system.

Facilities

The facilities provided for the program are adequate for a class cohort of 24 students. The classrooms, laboratories, clinical space, storage, animal holding, and office space are adequate for this cohort. However, should the class size be increased, the space provided would prove less than adequate. Each part of the facility is fully utilized and students are provided access at any time provided they have building access. This allows participation in animal husbandry and clinical veterinary medicine and surgery whenever it is needed. Much of the daily maintenance is performed by the students and staff as a part of the program but specialized facility maintenance is performed by the CSN facilities personnel as needed. The current facility condition would be classified as excellent due to recent renovations and upkeep by the facilities department.

Instructional Equipment

The veterinary technology program equipment is exceptional. Due to previous successes in obtaining outside grant awards, yearly equipment funding, and program budget and income, the program has equipment that exceeds most general veterinary practices and approaches that of specialty facilities. The program has state-of-the-art diagnostic imaging equipment, a fully functional surgical suite and accompanying equipment to prepare surgical instrumentation, three dental hygiene stations with accompanying equipment for treating most dental pathology, a complete gas sterilization unit, and three complete blood and urine analyzing stations. The equipment for general student learning is also exceptional. Microscopes, incubators, animal mannequin simulators, animal and specific body part anatomical models, and all needed basic laboratory equipment is provided and is of high quality. As an outside accrediting institution is part of the program, there is a list of essential equipment that must be in possession in order to achieve accreditation. The CSN veterinary technician program possesses all of the required equipment and much more to increase the learning opportunities for the students.

External Factors

Enrollment trends

Enrollment in the Veterinary Technology program has remained relatively consistent because of the limited entry nature of the program. However it has been noticed that the number of qualified applications has increased somewhat as evidenced by the need to seek approval to increase the class size for four of the last five years. Acceptances for 2018 were 26, for 2017 there were 24, in 2016 there were 18, in 2015 there were 22, and in 2014 there were 25. This has prompted the plan to permanently increase the class size by 20% following notification of the AVMA – CVTEA. The number of faculty has remained consistent with one faculty member per class cohort for didactic lecture courses and two faculty members per class cohort in course laboratory sections. This ratio, in laboratory sections using live animals, has been evaluated by the AVMA – CVTEA and the mandate has been announced that in 2020 the ratio must be one instructor for each eight students (all courses that have laboratory sections at CSN use live animals during the course).

The number of students completing the program at CSN is somewhat lower than the acceptance numbers due to, for the most part, voluntary student withdrawal from the program due to personal reasons. The number of program completers for the last three years has been 14 for 2018, 15 for 2017, and 16 for 2016. This is a ratio of 7-8 for each FTE faculty member.

Currently, the demand for graduates by employers remains higher than the number available as evidenced by 100% job placement for those graduates that seek employment immediately upon completion. In many cases the students are hired during the first year or shortly after completing the first year of the program when they become eligible for the Veterinary Technician in Training license in the State of Nevada. Local veterinary practitioners routinely seek students by placing employment opportunities on the CSN job board and sending electronic announcements to current students and alumni through the program list serves.

Student demand for the program is considerably higher than actual student admission. This information is expressed in the section for Institutional Research.

Alumni Survey

Each year alumni are surveyed 6 months post-graduation for their feelings regarding the perceived level of preparedness provided by the program for employment in the various aspects of the veterinary profession. A summary of the surveys for the years 2016, 2017, and 2018 is provided. The data is retrieved from 18 of 42 graduate surveys that have been returned (43% return rate). Of the surveys returned, 3 of the graduates are not employed by choice in the Veterinary career field.

See Tables Below

Student Opinions on personal preparedness in key disciplines*

Area	High	Low	Average
Facility Operations	10	5	8.7
Pharmacology & Toxicology	10	1	7.9
Nursing (Small Animal)	10	5	9.0
Nursing (Large Animal)	10	4	7.6
Anesthesia	10	7	8.8
Surgical Nursing	10	7	9.2
Laboratory Skills	10	6	7.9
Imaging	10	0	8.1
Laboratory Animal Procedures	10	3	6.9

*Students were encouraged to select multiple area of preparedness.

Student Opinions on level of work place utilization of technicians in key disciplines*

Area	High	Low	Average
Facility Operations	10	6	7.3
Pharmacology & Toxicology	10	7	8.5
Nursing (Small Animal)	10	6	8.8
Nursing (Large Animal)	10	0	4.0
Anesthesia	10	8	9.2
Surgical Nursing	10	6	8.7
Laboratory Skills	10	5	7.5
Imaging	10	1	8.3
Laboratory Animal Procedures	10	0	5.3

* While CSN graduate surveys do not directly ask about employment satisfaction; usage in the workplace is evaluated. This has been associated with occupational fulfillment.

Employment Type*

Area	Summary
Small Animal (Exclusive)	12
Small Animal (Predominant)	1
Mixed Practice	
Large Animal (Exclusive)	1
Equine	
Academic	1
Research	
Industry/Commercial	
Government	
Not-for-Profit Organizations	
Other:	
Not Employed	3

* Of the graduate surveys returned.

Program Elements

The unique elements of the Veterinary Technology program at CSN begin with the hands-on opportunities to not only work with animals for the onset of the program in actual clinical settings and extend to the opportunity to gain instruction from veterinarians from across the country as they participate in the affiliation with the Western Veterinary Conference. CSN has a licensed and registered functioning veterinary clinic that sees selected patients during each semester. The patients come from student owned animals, animals owned by the faculty of the School of Health Sciences, non-profit and rescue organizations, as well as patients referred to the clinic for surgical consultations with an American College of Veterinary Surgeons diplomate. An additional clinical opportunity is afforded when students and faculty are invited to create a temporary veterinary clinic in the town of Beatty, Nevada every two to three years. There are no veterinary facilities or practitioners in Beatty so the program is asked to provide those services for the population. The affiliation with the Western Veterinary Conference allows the student to 'function' as practicing technicians assisting Doctors of Veterinary Medicine as they endeavor to become licensed in the United States and Canada from literally around the world during the monthly Clinical Proficiency Examination.

Challenges to the program include trying to remain current with the expanding knowledge base in the field of veterinary medicine as well as with the ever increasing technology that becomes available in the medical field. Additional challenges actually come from the increasing demand for graduates. As the need expands there are movements by private, non-technician organizations as well as some veterinary technician education institutions and veterinarians to allow non-technicians (no formal AVMA – CVTEA education) to function in various capacities generally held by educated and licensed veterinary technicians. An additional challenge that is becoming increasingly evident is lack of student preparation with basic science and math skills before beginning the program.

The CSN Veterinary Technology program has been an active community partner since its initial accreditation in 2006. Program students volunteer with local rescue and non-profit animal welfare organizations to provide community service throughout the valley. Heaven Can Wait Animal Society sponsors free pet vaccination clinics and a low-cost (or free) spay and neuter clinic for low income families as well as a no-cost spay and neuter service for feral cats and dogs. Students and faculty are regular participants in these services for Las Vegas residents. This not only provides a valuable service to the community but it gives students an additional opportunity for gaining valuable experience. Other organizations that benefit from program volunteerism include Pups on Parole, a service that provides women inmates at a local facility the opportunity to train abandoned dogs for future adoption to community members, the Nevada Society for the Prevention of Cruelty to Animals, Las Vegas Valley Humane Society, and the Clark County Community Cat Coalition. CSN students and faculty provide veterinary services to each of these organizations as a means of providing service to people and animals alike at the same time of increasing their own knowledge and experience.

External Validation

Accreditation Status

The Veterinary Technology program at the College of Southern Nevada was the first such program in the State of Nevada to be fully accredited by the American Veterinary Medical Association's Committee on Veterinary Technician Education and Activities (AVMA-CVTEA). The initial accreditation was awarded in 2006. The most recent site visit was March of 2017 and the report provided again granted full accreditation. The letter indicating full accreditation with deficiencies is attached.

In addition to the site visits, biennial reports are necessary to document meeting of deficiencies and maintenance of standards. The report for 2019 has been submitted and at present the decision by the AVMA-CVTEA has not been rendered. The biennial report is also included. This report also contains statistical data that is important for program review.



Sent via email to dennis.olsen@csn.edu

April 25, 2017

Dr. Dennis Olsen
College of Southern Nevada
Veterinary Technology Program
6375 W. Charleston Blvd.
Las Vegas, NV 89146

Dear Dr. Olsen:

Congratulations! At its April 20 – 23, 2017 meeting, the AVMA Committee on Veterinary Technician Education and Activities (CVTEA) granted continued full accreditation to the College of Southern Nevada veterinary technology program after deliberation of the report of evaluation from the March 1 – 3, 2017 site visit. Accreditation remains in effect until your next site visit, contingent upon favorable review of requested reports.

A final copy of the report of evaluation is included and a copy will be sent to college administration as indicated in the near future. Included is a summary of critical and major deficiencies with details regarding future reporting requirements.

The Committee considered the post site visit response to the critical and major deficiencies in its accreditation decision. After consideration of the documentation provided, the Committee has determined that continued reporting is required on the following deficiencies (see chart(s) below):

Critical deficiency(ies): 3,4,5

Major deficiency(ies): None at this time

For your information, the CVTEA does not consider an affiliation agreement or memorandum of understanding with off-campus sites as being equivalent to a signed agreement between the parent institution and personnel as outlined in accreditation Standard 10e:

10e. Successful completion of all required skills found in the Veterinary Technology Student Essential and Recommended Skills List, Appendix I must be evaluated and documented by program personnel who use standard criteria that reflect contemporary veterinary practice. Program personnel should be a credentialed veterinary technician or veterinarian. Program personnel must have a signed agreement with the parent institution, complete training in evaluating essential skills, and regularly communicate with the program director.

The last sentence in this accreditation standard was added to the *Policies and Procedures of the AVMA CVTEA* and became effective in July 2015. Programs are notified of any changes to accreditation standards via direct email communication and biannual newsletters. The Committee is requesting additional reporting and documentation with regard to a contractual arrangement between the College and the personnel who are evaluating students completing requisite skills at off-campus locations.

Page 1 of 3

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The program is on a biennial reporting schedule; however, the Committee has requested an interim report due fall 2017 (September 8, 2017) to address the above deficiencies. The report template will be sent out approximately 2 months prior to the due date. The next biennial report is due spring 2019 (deadline date to be announced).

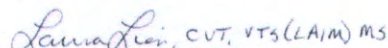
In accordance with the *Policies and Procedures of the AVMA CVTEA*, documentation of progress toward compliance with critical and major deficiencies must be included in the program's report to CVTEA. Insufficient progress toward meeting deficiencies may be considered cause for reduction of the program's accreditation status. If there are any changes that impact critical or major deficiencies that the CVTEA previously determined do not require continued reporting, the program must report this change. The next full accreditation site visit is scheduled for 2023.

Congratulations on maintaining accreditation. On behalf of the evaluation committee, thank you for the courtesy and hospitality shown during the site visit. If you have any questions, or if we may be of assistance in the preparation of your next report, please do not hesitate to contact us at 800-248-2862 or Ms. Julie Horvath (jhorvath@avma.org; ext. 6624).

Sincerely,



Rachel A. Valentine, RVT, BS
Assistant Director
rvalentine@avma.org; ext. 6676



Laura Lien, CVT, VTS (LAIM), MS
Assistant Director
llien@avma.org; ext. 6609

AVMA Center for Veterinary Medical Accreditation

RAV/LLU/jah

cc: Dr. Michael Richards, President
Ms. Cassandra Gentry, Department Chair of Health Related Professions

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College of Southern Nevada ROE 2017		(Office use only)
CRITICAL DEFICIENCY (IES) Critical deficiencies apply to situations that clearly result in a program's inability to meet a Standard, and/or subject students, faculty, or others to unacceptable levels of risk. Documentation of significant progress toward compliance with each critical deficiency must be achieved by the time of the program's next report to CVTEA. Lack of compliance may be considered cause for reduction of the program's accreditation status.		Is the Deficiency met with no further reporting required or unmet with continued reporting required?
It is critical that:		(comments); date
1.	An Ambu resuscitation bag, endotracheal tubes, and epinephrine be added to the emergency crash kit. (4b)	Met; 04/2017
2.	Potential safety issues be addressed with respect to biohazard safety signage on the microbiology incubators and tracking of soda lime usage on anesthetic machines. (4e)	Met; 04/2017
3.	All radiographic exposures be logged in a radiology logbook in order to track exposures and in keeping with contemporary veterinary practices. (4e, 5d)	Unmet; when available, submit a copy of the completed logbook that includes entries
4.	Documentation exist that all required skills have been performed by all students and have been evaluated by Program personnel using standardized criteria. (10e)	Unmet; when available, submit one example of a completed student skills assessment with name redacted
5.	Evidence exist that all Program Personnel have a signed agreement with the parent institution, complete training in evaluating essential skills, and regularly communicate with the program director. (10e)	Unmet; submit evidence of a signed agreement between the College and the individual personnel who are evaluating students at off-campus locations.

College of Southern Nevada ROE 2017		(Office use only)
MAJOR DEFICIENCY (IES) Major deficiencies apply to situations that jeopardize the ability of the program to meet a Standard. Progress toward meeting each major deficiency must be demonstrated on an annual or biennial basis. Documentation of steps taken toward compliance with major deficiencies is required. Lack of compliance within the assigned five- or six-year period, prior to the next scheduled complete evaluation, may be considered cause for reduction of the program's accreditation status.		Is the Deficiency met with no further reporting required or unmet with continued reporting required?
It is required that:		(comments); date
1.	IACUC-approved animal care and use protocols contain evidence that literature searches for alternatives have been conducted for all painful and/or distressful procedures. (5a)	Met; 04/2017

College of Southern Nevada CVTEA Spring 2019 Annual, Biennial, Interim Report
College of Southern Nevada

Introduction

Dear Program Director,

You are receiving this message because you have either an annual, biennial, or interim report due to the AVMA CVTEA by **February 28, 2019**.

Proceed by answering the following questions. If you need help with answering a question try clicking on the "help" button for assistance. Some questions will ask you to upload documents as well. Follow the prompts for doing so.

Your report will be reviewed at the April 25-28, 2019 CVTEA meeting. Accreditation letters are typically sent out within two weeks following the meeting.

The Program Director must be the primary author of the report.

General Questions

G1. TYPE OF REPORT

Choose the type of report you are completing. This is provided in your last accreditation letter.

- Biennial Report

G2.

Enter Name of Program Director

Dennis Olsen, DVM, MS, DACVS

G3.

Enter Name of Program Director's Manager/Supervisor

Cassie Gentry

G4.

Title of Program Director's Manager/Supervisor

Department Chair, Health Related Professions

G5.

Provide Email for Program Director's Manager/Supervisor

cassie.gentry@csn.edu

Standard 1 - Institutional Accreditation

1.0

Provide name of institutional Accrediting agency:

Northwest Commission on Colleges and Universities (NWCCU)

1.1

Have any changes occurred with regard to accreditation with your institutional accreditor?

- No

Standard 2 - Finances

2.1

Have any significant changes occurred recently with the program's budget? For example, this would be changes of 25% or more in fiscal resources.

- No

Standard 3 - Organization and Communication

3.1

Does the program anticipate any program or organizational changes in the near future or has the program undergone any recent program or organizational changes?

- Yes

3.1A

Describe the program or organizational changes anticipated.

New College President - Fredrico Zaragoza, Ph.D.

Standard 4 - Physical Facilities and Equipment

4.1

Have any major changes occurred with program facilities or does the program anticipate any major changes? Examples of a major change would be large necessary repairs (leaky roof) or long term remodeling projects.

- No

4.2

Has the program had any USDA inspection reports indicating non-compliant items?

- No

Standard 5 - Resources for Clinical Instruction

5.1

Have any changes occurred with availability of requisite equipment?

- No

Standard 6 - Library and Information Resources

6.1

Have any major changes occurred with library resources?

- No

6.2

Does the Program have a librarian?

- Yes

Standard 7 - Admissions

7.1

Provide retention information for the following academic years by completing the table below. Note, the table will not automatically calculate. This feature will be available in the future. For now, please manually calculate your retention % using the formula $(EE+G)/(E+NS+RE)$.

New Starts are brand new students that have never been enrolled in the program.

Re-entries are students that have left the program and then decided to return. The program has then allowed them to re-enter.

Each student should only be placed into one of the below "categories". Do not double count students. For example, do not place New Starts in the Enrollment or Ending Enrollment categories.

The Enrollment number and Ending Enrollment are students that are progressing through the program.

Retention	Example (20XX-20XX)	July 1, 2015 - June 30, 2016	July 1, 2016 - June 30, 2017	July 1, 2017 - June 30, 2018
E=Enrollment (as of July 1)	79	16	15	15
NS = New Starts (July 1 to June 30)	22	20	19	24
RE = Re-entries (July 1 to June 30)	3	0	0	0
G = Graduates (July 1 to June 30)	18	15	15	14
EE = Ending Enrollment (as of June 30)	90	15	15	17
Retention % (EE+G)/(E+NS+RE)	96%	83	88	80

Standard 8 - Students

8.1

Have any student injuries or accidents occurred that required medical assistance beyond first aid?

- No

Standard 9 - Faculty

9.1

Provide Name(s) of Full-time equivalent (FTE) licensed DVM

Dennis Olsen, DVM, MS, Diplomate, American College of Veterinary Surgeons

9.2

Provide Name(s) of current Full-time equivalent (FTE) credentialed veterinary technician who is a graduate of an AVMA-accredited veterinary technology program

Aubree Englert, BS, LVT

Melissa Schalles, MS, LVT (administrative faculty)

9.3

Are there current vacancies in program faculty?

- No

Standard 10 - Curriculum

No questions for this section. Programs are reminded that pre-approval is required for the following:

- Changes in courses that represent a significant departure in either content or method of delivery.
- Changes in addition of any degree or credential level offered.
- Changes in the clock hours (student contact hours) for completion.
- Change in required credit hours of 10 percent or more for degree completion.

Programs must complete a Substantive Change Report (SCR) for any of the above. An SCR can be provided by emailing jhorvath@avma.org.

DO NOT UPLOAD ANY SUBSTANTIVE CHANGE REPORTS (SCR) TO THIS REPORT.

Email all SCR direct to staff at jhorvath@avma.org

Standard 11 - Outcomes

11.1

Provide the website link where outcomes data is reported to the community.

<https://www.csn.edu/programs/veterinary-tech>

11.2

Provide the Annual VTNE Performance Data. The annual VTNE pass percentage is calculated as follows:

Number of first-time candidates passing / Number of first time candidates

Annual VTNE Pass Percentage	July 1, 2013-June 30, 2014	July 1, 2014-June 30, 2015	July 1, 2015-June 30, 2016	July 1, 2016-June 30, 2017	July 1, 2017-June 30, 2018
Number of first-time candidates passing VTNE	3	15	14	13	10
Number of first-time candidates that have taken the VTNE.	5	19	18	15	15
VTNE Pass Percentage%	60	79	78	87	67

11.3

Provide the **three-year** pass percentage on VTNE.

The three-year pass percentage on VTNE is calculated as follows: $X/Y * 100$ = Three-year pass percentage

X is the number of first time candidates that passed the VTNE

Y is the number of first-time candidates that have taken the VTNE

The three-year pass percentage on VTNE is calculated as follows: $X/Y * 100$	July 1, 2015 - June 30, 2018
Total number of graduates taking exam for the first time (total for three years for the timeframe indicated)	48
Three Year VTNE Pass Percentage %	77

11.4

Are students required to take a state veterinary technician exam? If yes, submit the actual score report since the last report to CVTEA. If state exam scores are not provided to the program, then also choose "no state scores available". If uploading scores, do not send individual student scores, just summary pass/fail results. Submit reports new since your last report to CVTEA.

- Yes, Students are required to take a state exam
- No state scores available

11.5

Upload recent VTNE Score reports. Only upload new reports since your last submission to CVTEA. If you do not have any new score reports to upload, choose NO DATA.
AAVSB School CVTEA Report Nov 2017-Dec 2018.pdf

☐ No Data

Deficiency Response

Using your last accreditation letter, enter the UNMET CRITICAL and/or MAJOR deficiencies that the CVTEA has requested continued reporting on. Type in the deficiency **verbatim and keep the deficiency number the same**. Do not re-number. Deficiencies that require further reporting are identified in your last accreditation letter. If no deficiencies require further reporting, then simply enter "0" for deficiency number and "none" in the deficiency text **AND** Action Taken area.

Provide:

Details of actions/changes that have taken place to address the specific deficiency since the time of the site visit.

An appropriate timetable for its satisfaction.

Supporting documentation where appropriate.

NOTE: If there have been any changes that have impacted CRITICAL or MAJOR deficiencies that the CVTEA previously determined do not require continued reporting, the program must report this change.

LAST SITE VISIT YEAR

Enter the YEAR of your last site visit.

2017

Critical Deficiency(ies) Unmet

Enter your UNMET Critical Deficiencies verbatim from your last accreditation letter. Keep the deficiency number the same. If no deficiencies require further reporting, then simply enter "0" for deficiency number and "none" in the deficiency text **AND** Action Taken area.

Critical Deficiency Number	Critical Deficiency	Action Taken to Address Deficiency
4	Documentation exist that all required skills have been performed by all students and have been evaluated by Program personnel using standardized criteria. (10e)	The College of Southern Nevada currently utilizes an Essential Skills Log for documentation of completion of required and essential skills. Senior Veterinary Technology Program students are required to meet with program personnel, fall and spring semester of their second year to verify completion of essential skills utilizing the standardized criteria listed in their log books. Maintaining program student's books would not be possible, as they are required to purchase the logs at the start of the program; however a specialized check list has been created, to duplicate a list of all essential skills, date completed, and licensed professional who evaluated the task. This check list is reviewed and compared to the log book with the student prior to completion of the program, and is maintained with program personnel. Please find copies of the two most updated check lists attached to this report. The CSN Essential Skills Logs are updated every July, to meet the newest version of the CVTEA's Policies & Procedures Guidebook. The newest version of this log went into effect for the program class completing Spring of 2019. Completed examples of this skills assessment will not be available until the end of the Spring 2019 semester, when the current senior class is scheduled to complete the program. Please find the two most updated CSN Essential Skills Logs attached to this report and 3 partially complete assessment records.

Documents

Skills Log Check List-2017 (For Class of 2019).pdf

Skill Log Check List Student 1.pdf

Skills Log-Update 2018.pdf

Skill Log Check List Student 2.pdf

Skills Log-Update 2017.pdf

Skills Log Check List-2018 (For Class of 2020).pdf

Skill Log Check List Student 3.pdf

Major Deficiency(ies) Unmet

Enter your UNMET Major Deficiencies verbatim from your last accreditation letter. Keep the deficiency number the same. If no deficiencies require further reporting, then simply enter "0" for deficiency number and "none" in the deficiency text **AND** Action Taken area.

Major Deficiency Number	Major Deficiency	Action Taken to Address Deficiency
0	No unmet major deficiencies.	Not applicable.

Department Chair Information

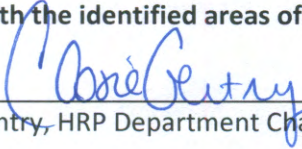
Areas of Concern and Recommendations

Department: Veterinary Technology

Identified Areas of Concern:

1. At this time, there are no significant areas of concern.

I agree with the identified areas of concern and proposed solutions presented by the program director.


Cassie Gentry, HRP Department Chair

3-29-19
Date

SUPPLEMENTAL NARRATIVE QUESTIONS - PROGRAM

Data to be provided by Chair/Program Dir/Lead Faculty

Please respond on this form or attach additional pages. Answer only questions that are relevant to this program.

CORE MISSION:

- 1 How does this program relate to the Mission and Core Themes of the College? (See appendix)

The program, created in 1998, was a response by CSN to help meet the needs of the State of Nevada that had recently adopted the requirement for those individuals desiring to work as veterinary technicians (nurses) to obtain a degree that would allow them to sit for the Veterinary Technician National Examination. Prior to this time there was no educational opportunity for those wishing to enter the field in the state of Nevada. Therefore this program continues to provide students with an opportunity to reach educational goals that will allow them to not only enter into but to excel in this important profession. By insisting that the program attain a level of excellence that would qualify for national accreditation by the American Veterinary Medical Association's Committee on Veterinary Technician Education and Activities (AVMA-CVTEA), the college has 'raised the bar' regarding the scientific literacy of members of the profession. This in turn has aided the people and the state of Nevada by improving the care of companion and production animals which enhances the quality of life for people and animals alike.

- 2 To the best of your knowledge, how and to what extent is this program essential because of state laws, regulations, outside agency regulations, Board of Regents or Legislative priorities?

The state of Nevada has adopted statutes and policies that require those that perform the duties of a veterinary nurse to pass national certification examinations and then obtain a license to practice as such. Not only was the program at CSN the first such opportunity in the state, it was the first fully accredited program. It has been the standard that other institutions have followed to create other programs in Nevada. Without this program students would either have to travel to the Reno / Carson City area or pay a great deal more, locally or online, to obtain an education that would qualify them to practice as a veterinary nurse.

- 3 How and to what extent does this program relate to programs at other NSHE institutions (for example, overlapping programs, articulation or transfer relationships, etc.)?

The program has an excellent relationship with the program at Truckee Meadows Community College and has served as the standard for development of that program. The courses offered have common course numbering with that institution and students can transfer seamlessly. Students are able to obtain general education requirements at any NSHE institution which qualify them for acceptance into the CSN veterinary technology program.

- 4 How and to what extent does this program relate to programs at non-NSHE colleges in Southern Nevada?

There is one non-NSHE veterinary technology program in the state. It is interesting that the primary faculty members and director are graduates of the CSN program. As that program was starting CSN invited students from that program to participate in exceptional learning opportunities through the affiliations with private veterinary organizations established by the CSN veterinary technology program.

- 5 How and to what extent does this program depend upon prerequisite courses from other disciplines at CSN?

The veterinary technology program graduates are awarded an Associates of Applied Science degree from CSN. This requires general education courses in the biologic sciences, mathematics, and English as prerequisites for application consideration and additional science, communications, human relations, social science/humanities, and United States / Nevada constitution courses to complete this degree.

- 6 How and to what extent does this program utilize other college resources for academic support (for example, library, technology, counseling, disability resource center, tutoring, writing or math centers, etc.)?

The Veterinary Technology program depends on the library at CSN to provide access to collections of veterinary periodicals and video based training resources. These resources are accessed by students and faculty alike to augment the learning and teaching process. The Office of Technology Services provides support for the many computers and academic presentation equipment essential in the program. Students with disabilities are evaluated by the Disability Resource Center prior to initiating an educational plan and they offer counseling to students and faculty to make sure that students have every opportunity to succeed. There are also close, beneficial associations with other programs in the college. The Dental Hygiene, Radiation Therapy, Emergency Medical Services, Surgical Technology, and Sonography programs have all been resources for program students to enhance their acquisition of medical knowledge.

QUALITY:

- 7 Does this program have an advisory board, or does the department have an advisory board relevant to this program? Describe briefly.

There is a very active Veterinary Technology advisory board with members appointed by the college president or designee. The advisory board meets at least twice yearly to discuss program concerns and offer suggestions and support. The board is comprised of veterinary professionals (DVM and nurses) in private practice, corporate and industry endeavors, and laboratory services. There are also non-veterinary medical personnel such as dental specialists, animal rescue and sheltering representatives, general public and students. The advisory board has been instrumental at creating the policy that allows the CSN Veterinary Nursing Teaching Clinic to function as not only a learning opportunity for the students but also a source of income to provide additional resources for the program.

- 8 If this program has a specialized accreditation, is this accreditation necessary for alumni licensure or employability?

In the state of Nevada and all but one state in the union, credentials from an AVMA-CVTEA accredited program are required to take the veterinary technician national examination to obtain a license to practice as a veterinary nurse. These credentials are also recognized in some non-USA countries and territories.

- 9 How and to what extent does this program contribute to CSN's regional or national reputation?

When the CSN program was evaluated for accreditation by the AVMA-CVTEA representatives, the feedback provided included the comment that they had just seen a "gold standard" program. This program has been the model for other programs that have been created not only in this state but others. The college support has allowed the program to obtain equipment and supplies that is literally unique in the United States. The faculty that teach at this program, whether they be employees or affiliate members, are not only nationally but internationally recognized experts in various specialty fields. The association that the program has developed with private veterinary organizations has created a program that is literally one of a kind! There is no other program in the nation that students are provided with so many experiential learning opportunities and access to instructors that are world renowned experts.

DEMAND:

- 10 Describe the level and nature of external demand for this program (for example, occupational data, labor statistics, employer surveys, student surveys, etc.)?

CSN veterinary technology students are consistently sought by potential employers as evidenced by position announcements that are sent to the program for posting on the job board and list serves of program alumni. Employment of veterinary technologists and technicians nationally is projected to grow 20 percent from 2016 to 2026, much faster than the average for all occupations.
(<https://www.bls.gov/ooh/healthcare/veterinary-technologists-and-technicians.htm>)

In Nevada, according to Projections Central - State Occupational Projections, The long term projections for veterinary technologist and technicians in the state of Nevada is a 38.3% increase. (<http://www.projectionscentral.com/Projections/LongTerm>)

- 11** Describe the level and nature of external financial or practical support for this program (for example, grants, donations, employer or clinical partnerships, etc.)?

The program has received considerable support from the community in the form of donations, materials, and clinical affiliations. There are 12 clinical affiliations that are not only a source of experience for the students but in many instances have become a source of employment for students after they have completed the program. Private support of nearly \$150,000.00 from the Eleanor Kagi Foundation has allowed the program to acquire equipment that allows group learning through live video transmission to anywhere computer access is available. Federal grants received have approached and potentially exceeded \$1,000,000.00. This has allowed the program to acquire equipment that as mentioned is unique. The program now has state-of-the-art equipment that exceeds most private general practices and rivals many private specialty practices.

- 12** What other options exist for students in the region to earn this degree or certificate?

There are two other programs in the state of Nevada that offer the veterinary technology degree, one through an NSHE institution in northern Nevada and another proprietary institution in Las Vegas. There are also programs that are offered online.

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