

AC 2020 – 2021 Assessment

Veterinary Technology Program (Associate Degree)

College: Arts and Sciences

Prepared by: Douglas Landry

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Approved by: Francene Lemoine

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Northwestern Mission: Northwestern State University is a responsive, student-oriented institution committed to acquiring, creating, and disseminating knowledge through innovative teaching, research, and service. With its certificate, undergraduate, and graduate programs, Northwestern State University prepares its increasingly diverse student population to contribute to an inclusive global community with a steadfast dedication to improving our region, state, and nation.

College of Arts and Sciences Mission: College of Arts and Sciences' Mission. The College of Arts & Sciences, the largest college at Northwestern State University, is a diverse community of scholars, teachers, and students, working collaboratively to acquire, create, and disseminate knowledge through transformational, high-impact experiential learning practices, research, and service. The College strives to produce graduates who are productive members of society equipped with the capability to promote economic and social development and improve the overall quality of life in the region. The College provides an unequaled undergraduate education in the social and behavioral sciences, English, communication, journalism, media arts, biological and physical sciences, and the creative and performing arts, and at the graduate level in the creative and performing arts, English, TESOL, and Homeland Security. Uniquely, the College houses the Louisiana Scholars' College (the State's designated Honors College), the Louisiana Folklife Center, and the Creole Center, demonstrating its commitment to community service, research, and preservation of Louisiana's precious resources.

School of Biological and Physical Sciences Mission: The School of Biological and Physical Sciences will become a reputable leader in public higher education by providing a transformative science educational experience using innovative instructional methods and through the scholarly achievements of our faculty, staff, students, and alumni. The School serves and inspires the students of Northwestern State University and the public through the development of lifelong learners who are excited about science, are disciplined in analytical and critical thinking skills, and are socially, environmentally, and ethically responsible. The School delivers Associate degrees in Veterinary Technology, Bachelor of Science degrees in Biology (with concentrations in Biomedical, Clinical Laboratory Science, Forensic Science, Natural Science, and Veterinary Technology), Applied Microbiology (with concentrations in Environmental and Applied Microbiology and Medical and Health Profession), and Physical Sciences. The School also offers minors in Biology, Microbiology, Wildlife Management, and Chemistry.

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Veterinary Technology Program Mission: The mission of the Northwestern State University of Louisiana Veterinary Technology Program is to prepare graduates who as veterinary technicians or technologists are clinically competent and who demonstrate:

- Excellent and compassionate patient care and services
- Excellent technical skills
- Professionalism and high ethical standards
- Promotion of public health
- Commitment to lifelong learning

Purpose: The Associate degree program in Veterinary Technology will prepare graduates to become *veterinary technicians* working in academia, animal research facilities, zoological parks, private industry, animal specialty veterinary practices, and general veterinary practices. Some graduates may further their education in attaining the Biology B.S. degree with the Veterinary Technology concentration, becoming veterinary technologists, and/or attending professional veterinary schools to become veterinarians. The program's goal is to educate graduates who possess entry level technical skills and a knowledge base in all areas of veterinary medicine.

Methodology: The assessment process for the AD Veterinary Technology program is as follows:

- 1) Data from assessment tools (direct and indirect, quantitative, and qualitative) are collected and returned to the program director.
- 2) The program director analyzes the data to determine if students met measurable outcomes.
- 3) Results from the assessment are discussed with the program faculty and technical staff.
- 4) Individual meetings are held with faculty/staff teaching core veterinary technology courses as required (show cause).
- 5) The program director, in consultation with the Veterinary Technology Program Advisory Committee, will propose changes to measurable outcomes, assessment tools for the next assessment period and, where needed, curricula and program changes. Substantive changes will be reported to the American Veterinary Medical Association Committee on Veterinary Technology Education and Activities (AVMA-CVTEA), the program's accrediting agency, within 30 days.

COVID-19 Statement: Due to the abrupt ending and the altered class structure that occurred due to COVID in spring 2020, some SLOs were directly impacted. Student labs and required skills had to be condensed and expedited before in-person instruction was concluded. Instructors were forced to transition to virtual teaching in a curriculum that had not utilized this approach in the past. Instructors had to learn new techniques and software to shift course instruction online. Students mostly returned home, and internet

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connectivity was certainly an issue for some students. In AC 2021-2022, course schedules and format will return to the normal, in-person format that was used successfully prior to COVID when the program statistics were showing improvement relative to the national averages.

Student Learning Outcomes:

SLO 1. Students completing the first-year sequence of courses in Veterinary Technology will demonstrate required didactic knowledge base and will demonstrate required “hands-on” technical skills application which will be documented for each student.

Course Map: Tied to course syllabus objectives/outline.

VTEC 1030-1031: Introductory Veterinary Technology II Lecture/Laboratory (71 skills)

Measure 1.1. (Direct – Knowledge)

Students enrolled in VTEC 1030 will demonstrate proficiency in accrediting-agency (AVMA-CVTEA) required didactic skills/knowledge base following standard criteria for evaluating essential skills (document following). Eighty-five percent (85%) of students completing the course will be able to demonstrate a basic understanding by averaging 70% or higher scores on the examinations.

Finding. Target not met.

Analysis. In AC 2019-2020, the target was met. Based on the analysis of the AC 2019-2020 results, in AC 2020-2021, quizzes were implemented, and individual student outcomes were monitored closely for early intervention with recommended study groups and/or tutoring or time spent with instructors during office hours, referral for individual counselling, and encouragement to spend the necessary time with the study material. The target was increased to 85% of students scoring 70% or higher on their examinations.

As a result of these changes, in AC 2020-2021, the target was not met. This calculation included one student who dropped the course during the semester. Therefore, 85% (28/33) of the students completing the course met the measure. It is suspected that the HyFlex nature of this class due to COVID restrictions had an impact in the regression as online students had less interaction during classes.

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2019-2020	VTEC 1030	44	37	84%
2020-2021	VTEC 1030	34	28	82%

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Decision. In AC 2020-2021, the target was not met. Based on the analysis of the AC 2020-2021 results, quizzes will be adjusted to promote class attendance and regular review of the material. There will be reordering of material to coincide with the material covered in the VTEC 1031 laboratory. Students that score <65% on the initial exam will be contacted by the instructor to discuss deficiencies and a plan to improve understanding. Students with an average <70% average at midterm will also be contacted to recommend a meeting with the instructor during office hours to discuss problems and devise a plan to enhance student success.

Measure 1.2. (Direct – Skill / Ability)

One hundred percent (100%) of students enrolled in VTEC 1031 will each demonstrate ability to complete 71 required technical skills following standard criteria established for each skill (document following), and a faculty veterinarian or credentialed veterinary technician will document completion of demonstration of each skill for each student successfully completing the laboratory course.

Finding. Target met.

Analysis. In AC 2019-2020, the target was met. Based on the analysis of the AC 2019-2020 results, in AC 2020-2021, PowerPoint presentations and videos were available for students to review prior to the lab period. Pre-lab quizzes were used to ensure that students reviewed the material and came to lab prepared.

As a result of these changes, the target was met in AC 2020-2021 with 100% (30 of 30) of students achieved the target measure.

Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2019-2020	VTEC 1031	41	40	100%*
2020-2021	VTEC 1031	30	30	100%

(NOTE: one student did not yet complete the course requirements before the academic year reporting was due. The incomplete work was related to the COVID-19 shutdown and will be completed in the following semester. The results indicated with the asterisk include all students who completed the assessment procedure. This student did complete the skill in 2020-2021.)

Decision. In AC 2020-2021, the target was met. Based on the analysis of the AC 2020-2021 results, the plan is to change Measure 1.2 to require students to average 70% or higher in the course and demonstrate the required 71 technical skills. This will provide a more meaningful assessment. Considering this change and there will be some students

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who will withdraw or will not pass the course, the initial target will be 85%. Students will have hands-on individualized instruction with a student to instructor ratio of <8:1, documentation of each student's attainment of skills, and the requirement that each student must attain the required skills to receive a successful grade of course completion. Attendance of each laboratory session as scheduled or by make-up sessions will be required to ensure that each student attains the required skills.

SLO 2. Students completing the second/third year sequence of courses in Veterinary Technology will demonstrate development of required didactic knowledge base and will demonstrate required “hands-on” technical skills application (which will be documented for each student).

Course Map: Tied to course syllabus objectives/outline.

VTEC 2060: Veterinary Pharmacological Calculations Lecture

VTEC 2600: Animal Care and Health Lecture

VTEC 3010: Animal Diseases Lecture

VTEC 3200-3201: Veterinary Hospital Technology II Lecture/Laboratory (63 skills)

VTEC 3700-3701: Veterinary Radiology Lecture/Laboratory (11 skills)

Measure: 2.1. (Direct – Knowledge)

Students enrolled in VTEC 2060, 2600, 3010, 3200, and 3700 will demonstrate proficiency in accrediting-agency (AVMA-CVTEA) required didactic skills/knowledge base following standard criteria for evaluating essential skills. Eighty percent (80%) of students completing the course(s) will be able to demonstrate a basic understanding by averaging 70% or higher scores on the examinations.

Finding. Target was not met.

Analysis. In AC 2019-2020, the target was met. Based on the analysis of the AC 2019-2020 results, in AC 2020-2021, faculty implemented more intensive instruction and the use of case studies in teaching, as well as early intervention when students are not performing well.

As a result of these changes, in AC 2020-2021, the target was not met. However, most individual courses did meet the measure. The two courses of concern are VTEC 2060 and VTEC 3010, which were the only 2 courses not individually achieving the measure. VTEC 2060 (Pharmacological Calculations) was converted to a completely virtual course due to COVID restrictions. The course material in VTEC 3010 (Animal Diseases) was expanded this year to include many other infectious and zoonotic diseases commonly seen in veterinary medicine that are pertinent to safety and information covered on the Veterinary Technician National Exam (VTNE). This required that the material be covered more quickly than in previous years. This analysis includes 10 students that withdrew from these courses (VTEC 2060 – 3, VTEC 2600 – 3, VTEC 3010 – 3, and VTEC 3200 –

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1) during the semester for various reasons. This means that 132/157 (84%) of the students that completed the semester were able to achieve the measure. Overall, 79% of students achieved scores of 70% or higher on the examinations.

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2019-2020	VTEC 2060	40	35	88%
2019-2020	VTEC 2600	25	17	68%
2019-2020	VTEC 3010	22	21	95%
2019-2020	VTEC 3200	10	10	100%
2019-2020	VTEC 3700	15	15	100%
2019-2020	TOTAL	112	98	88%

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2020-2021	VTEC 2060	46	30	65%
2020-2021	VTEC 2600	45	38	84%
2020-2021	VTEC 3010	32	24	75%
2020-2021	VTEC 3200	21	20	95%
2020-2021	VTEC 3700	23	20	87%
2020-2021	TOTAL	167	132	79%

Decision. In AC 2020-2021, the target was not met. Based on the analysis of the AC 2020-2021 results, in AC 2021-2022, early intervention will be established for students that score <65% on the initial exam. They will be contacted by the instructor to discuss difficulties and provide assistance to improve understanding. Students with a course average of <70% at midterm will also be contacted to recommend a meeting with the instructor during office hours to discuss problems and devise a plan to enhance student

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success. In VTEC 2060, the course will return to a face-to-face format as COVID restrictions allow to enhance student attendance, participation, and understanding. Recordings of instructional videos of an instructor performing various types of calculations will be available to students for reference and review. There will be a restructuring of the material covered in VTEC 2060 and 3010 to enhance comprehension. In VTEC 3010, it will be recommended that students organize the material into a chart format throughout the semester to aid in studying and comprehension. Examples of this will be provided throughout the semester. This will also allow for faster reference and consolidation of the material for the comprehensive final exam. Material covered in the course will be restructured to organize each of the diseases by organ systems involved to assist with grouping by similar clinical signs. By restructuring the material, the student interest will be maintained. Student interest in the class throughout the semester varies since some students have more interest in certain species (i.e. companion animal, equine, bovine, or exotic species) and material relating to these species will be spread throughout the semester.

Measure: 2.2. (Direct – Skill / Ability)

One hundred percent of students enrolled in VTEC 3201 will demonstrate mastery of 63 animal medical and surgical nursing and anesthetist skills through participation in live animal surgical procedures laboratories. One hundred percent (100%) of students enrolled in VTEC 3701 will demonstrate ability to complete 11 technical skills pertaining to diagnostic imaging. Each skill attainment will be documented in a student specific booklet for student demonstration/completion. Booklets will be evaluated for entire completion prior to student enrollment in internship practicum courses.

Finding. Target was met.

Analysis. In AC 2019-2020, the target was met. Based on the analysis of the AC 2019-2020 results in AC 2020-2021, stringent requirements for laboratory attendance and completion of skills to earn a passing grade were implemented. Students who successfully completed these laboratory courses performed all skills as required by the AVMA-CVTEA (American Veterinary Medical Association - Committee for Veterinary Technician Education and Activities).

As a result of these changes, in AC 2020-2021 the target was met. One hundred percent 25 of 25) of students performed all required skills.

Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2019-2020	VTEC 3201	10	10	100%
2019-2020	VTEC 3701	15	15	100%
2019-2020	TOTAL	25	25	100%

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Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2019-2020	VTEC 3201	20	20	100%
2019-2020	VTEC 3701	22	22	100%
2019-2020	TOTAL	42	42	100%

Decision. In AC 2020-2021, the target was met. Based on the analysis of the AC 2020-2021 results, the plan is to change Measure 2.2 to require students to average 70% or higher in the course and demonstrate the required 71 technical skills. This will provide a more meaningful assessment. Considering this change and there will be some students who will withdraw or will not pass the course, the initial target will be 85%. Students will have hands-on individualized instruction with a student to instructor ratio of <8:1, documentation of each student's attainment of skills, and the requirement that each student must attain the required skills to receive a successful grade of course completion. Attendance of each laboratory session as scheduled or by make-up sessions will be required to ensure that each student attains the required skills.

SLO 3. Following completion of other required courses entitled Veterinary Technology (VTEC), each student must enroll in a 12-credit hour internship practicum for 480 clock hours working under the direct supervision of veterinarians and/or credentialed veterinary technicians/technologists. The supervisor must submit comprehensive evaluations of each student's technical skills, reliability, and attitude while completing the practicum(s). Each student submits an evaluation of the internship site and supervisory staff to the program director at the completion of the internship practicum course. The students will receive positive ratings greater than or equal to 90% of the time.

Course Map: Tied to course syllabus objectives/outline.

VTEC 2900: Veterinary Internship Practicum

Measure 3.1. (Direct – Skill / Ability)

For VTEC 2900 participating students, each student's direct internship supervising veterinary professional will submit a written evaluation of the student's technical performance of the required 301 technical skills, rating the skills performance for each one on a scale of measurement of 0 – not applicable; 1 – poor; 2 – good; or 3 – excellent. Program expectations are those ratings of good-excellent will be earned for 95% or more of skills rated for each class of interns.

Finding. Target met.

Analysis. In AC 2019-2020, the target was met, and continued to be met in AC 2020-2021. Based on the analysis of the AC 2019-2020 results, in AC 2020-2021, students

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were provided with new pre-lab PowerPoint instruction, videos, and adjunctive material on class webpages that helped prepare them to complete the essential skills in Measures 1.2 and 2.2 as required by the AVMA-CVTEA.

As a result of these changes, in AC 2020-2021, the target was met. Ninety-nine percent (99%) of student skills performance rated good-excellent. Students in the 2020-2021 academic year received a negative rating for individual skills performance <1% of the time. This demonstrates that the program and curriculum are preparing students to be productive, successful employees entering the workplace.

Assessment Year	VTEC 2900	Excellent	Good	Poor
2019-2020	# ratings of skills performance	553	658	39
2019-2020	% ratings of skills performance	44.2%	52.7%%	3.1%

Assessment Year	VTEC 2900	Excellent	Good	Poor
2020-2021	# ratings of skills performance	605	587	7
2020-2021	% ratings of skills performance	50%	49%	1%

Decision. In AC 2020-2021, the target was met. Based on the analysis of the AC 2020-2021 results, the program instructors will invest in hands-on instruction of skills and improve upon the competency of those skills by incorporating repetition of those skills that are valued by employers of graduates into upper-level labs.

Measure 3.2. (Indirect – Attitude / Reliability)

Each student enrolled in VTEC 2900 is evaluated by the supervisor in the veterinary setting on several subjective performance indicators which pertain to job performance. The final evaluation includes ratings of Above Average, Average, Below Average, or Not Observed, for each student's maturity and judgment, dependability/reliability, initiative/originality, function as a team member, communication skills, work-place character/integrity/ethics, and potential as a veterinary technician. Additionally, the supervisor is asked to state the student's strongest and weakest points. The program expects 5% or less negative ratings (Below Average) for each class of interns.

Findings: Target met.

Analysis. In AC 2019-2020, the target was met. Based on the analysis of the AC 2019-2020 results, in AC 2020-2021, students were randomly assigned to surgery lab (VTEC 3201) groups so they would be forced to work with different individuals in a team effort to complete a variety of anesthesia and surgery tasks on a weekly basis. This allowed

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students to hold one another accountable, improves communication skills and teamwork, and required dependability/reliability from the entire group.

As a result of these changes, in AC 2020-2021, the target was met. Program students during AC 2019-2020 earned minimal (1%) negative ratings from supervisors in subjective characteristics such as work-place character/integrity/ethics, reliability, etc. for internship practicum students. This demonstrates that students who complete the challenging program curriculum prior to the internship course have the work ethic and dependability characteristics valued by employers of veterinary technicians.

Assessment Year	VTEC 2900	Above Average	Average	Below Average
2019-2020	# ratings of subjective characteristics	64	32	5
2019-2020	% ratings of subjective characteristics	63%	32%	5%

Assessment Year	VTEC 2900	Above Average	Average	Below Average
2020-2021	# ratings of subjective characteristics	34	46	1
2020-2021	% ratings of subjective characteristics	42%	57%	1%

Decision. In AC 2020-2021, the target was met. Based on the analysis of the AC 2020-2021 results, the faculty will incorporate requirements encouraging student ownership for their individual outcomes, assess students based on reliability in the care of animals, and require attending labs to complete required skills in the veterinary technology curriculum. This correlates well with their workplace performance during internships and after graduation.

SLO 4. Students will demonstrate proficiency in Veterinary Technology by passing scores of first-time test takers on the Veterinary Technician National Examination (VTNE) equal to the national average when evaluated over the most recent three-year window of time and will meet or exceed the national average for each measured domain score in the most recent evaluation available.

Measure 4.1. (Direct – Knowledge)

Students taking the **Veterinary Technician National Examination (VTNE)** will demonstrate proficiency by obtaining passing scores in percentages *equal to the national average percent* of students passing the examination on the first attempt, when examining the most recent available three-year school report. The VTNE is scored from 200-800,

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with 425 being a passing score. School reports are provided by the test administrators for each examination cycle and for the most recent three years ending on June 30.

Finding. Target not met.

AC 2019-2020: Improvement. NSU graduates 66.7% pass rate over last 3 years; national average pass rate is 73%.

AC 2020-2021: Slight regression. NSU graduates 64.7% pass rate over the last 3 years; national average pass rate is 74.1%.

Analysis. In AC 2019-2020, the target was not met. Based on the analysis of the AC 2019-2020 results, in AC 2020-2021, VTEC 2900 (Veterinary Anatomy and Physiology – Fall course), VTEC 3010, and VTEC 3700 were each updated with new PowerPoint presentations and expanded subject information by the new faculty for use in the hybrid teaching format that was employed due to COVID. This improved didactic knowledge in these areas. However, it will be the next academic calendar before these students are eligible to take the VTNE and we will be able to analyze this data.

As a result of these changes, in AC 2020-2021, the target was not met. The expected outcome was that graduates will equal the national pass rate percentage on their first attempt to pass the VTNE. While NSU graduates did not meet this target, the three-year pass rate has continued to gain over the last few years and is coming close to the national pass rate percentage in the most recent measures available. This demonstrates that the students are being exposed to the materials required to be successful on the examination. Some individual students continue to be not well motivated to review and prepare for the examination before attempting it for the first time, as demonstrated by the wide range of raw scores for individual students. In AC 2020-2021, the target was not met and there was slight regression in NSU graduate performance on the VTNE. However, it is apparent that the national average was maintained causing a 10% discrepancy between NSU graduates and the national average.

VTNE July 2016—June 2019	Pass	Fail
NSU graduates' performance (#)	21	13
NSU graduates' performance (%)	61.8%	38.2%
National average (%)	71%	29%

VTNE July 2017—June 2020	Pass	Fail
NSU graduates' performance (#)	24	12
NSU graduates' performance (%)	66.7%	33.3%
National average (%)	73%	27%

VTNE July 2018—June 2021	Pass	Fail
NSU graduates' performance (#)	22	12
NSU graduates' performance (%)	64.7%	35.3%
National average (%)	74.1%	25.9%

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Decision. In AC 2020-2021, the target was not met. Based on the analysis of the AC 2020-2021 results and to drive improvement, students will be encouraged to take Comprehensive Review (VTEC 4200) to help them succeed in passing the VTNE by reviewing didactic knowledge, domain structure/weighting, and using sample test questions from VTNE review books. This course is not required as part of the associate degree curriculum, but it benefits students by motivating them to review material before the exam. It will give them a better idea of what to expect and the areas in which they may be deficient. Instructors will also incorporate sample VTNE review questions into the appropriate courses that are taken by all students to ensure that they have as much understanding and exposure to examples of the VTNE as possible throughout the curriculum.

Measure 4.2. (Direct – Knowledge)

Additionally, nine domain scores by subject are provided to each school, which is helpful in determining when/where program curriculum changes/improvements are needed. The program director, along with program veterinary faculty/staff, evaluates the data provided in the most recent available school report for a comprehensive view of a comparison of our graduates to a national standard by subject. The goal is to have students meeting or exceeding the national average score for each domain subject.

Finding. Target not met.

Analysis. In AC 2019-2020, the target was not met. Based on the analysis of the AC 2019-2020 results, in AC 2020-20201, Dentistry and Pain Management/Analgesia were added as focus topic. Students were able to exceed the national average in those domains in one testing period.

As a result of these changes, in AC 2020-2021 the target was not met. Anesthesia continues to be a strong point for NSU students, and Emergency/Critical Care scores continue to be near the national average. In the October to December testing period, there was only one first-time testing student which could skew numbers during that period. However, there was a general regression in the raw totals. The alteration in courses during the spring semester of 2020 due to COVID had an impact since information pertaining to Surgical Nursing, Dentistry, Animal Care & Nursing, Diagnostic Imaging, Anesthesia, Emergency Medicine/Critical Care, and Pain Management/Analgesia are all partially or completely covered during that term. The labs had to be condensed and concentrated so they could be completed and required skills be documented before in-person labs were ceased. The didactic knowledge was covered during virtual lectures, but this was new territory for faculty and students alike and certainly affected the students' scores in those testing domains. As well, many of the VTEC lecture/lab schedules in AC 2020-2021 were forced to be altered into a Hyflex format (hybrid in-person and virtual) due to COVID restrictions. New faculty assumed responsibility for the program in AC 2020-2021, but the effects of those faculty will not be visible on VTNE scores until the 2021-2022 VTNE testing cycle based upon student eligibility to take the exam.

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VTNE Domain (Official report format changed) July 15—August 17, 2019	NSU Grad. Avg. Percent Correct*	National Avg. Percent Correct*
Pharmacy & Pharmacology	74.07%	83.04%
Surgical Nursing	78.43%	68.78%
Dentistry	75.00%	78.23%
Laboratory Procedures	54.90%	67.36%
Animal Care & Nursing	75.56%	70.54%
Diagnostic Imaging	75.76%	73.71%
Anesthesia	75.76%	71.39%
Emergency Med/Critical Care	72.22%	72.20%
Pain Management/Analgesia	51.52%	65.15%
RAW TOTAL	71.33%	72.19%

VTNE Domain (Official report format changed) November 15--December 20, 2019	NSU Grad. Avg. Percent Correct*	National Avg. Percent Correct*
Pharmacy & Pharmacology	76.67%	75.37%
Surgical Nursing	71.76%	68.40%
Dentistry	65.00%	68.81%
Laboratory Procedures	80.00%	69.87%
Animal Care & Nursing	68.00%	72.01%
Diagnostic Imaging	76.36%	64.12%
Anesthesia	60.00%	68.39%
Emergency Med/Critical Care	68.33%	68.58%
Pain Management/Analgesia	58.18%	58.78%
RAW TOTAL	69.33%	69.15%

VTNE Domain (Official report dates changed) March 15—June 30, 2020	NSU Grad. Avg. Percent Correct*	National Avg. Percent Correct*
Pharmacy & Pharmacology	72.22	73.17
Surgical Nursing	74.51	73.31
Dentistry	58.33	65.66
Laboratory Procedures	68.63	66.39
Animal Care & Nursing	78.33	76.71
Diagnostic Imaging	69.70	70.08
Anesthesia	75.00	74.94
Emergency Med/Critical Care	79.17	73.95
Pain Management/Analgesia	60.61	66.24
RAW TOTAL	72.11	72.11

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VTNE Domain (Official report dates changed) July 15—September 15, 2020	NSU Grad. Avg. Percent Correct*	National Avg. Percent Correct*
Pharmacy & Pharmacology	68.52	72.23
Surgical Nursing	68.63	71.56
Dentistry	55.56	71.83
Laboratory Procedures	76.47	77.27
Animal Care & Nursing	70.00	73.12
Diagnostic Imaging	63.64	71.13
Anesthesia	72.73	70.75
Emergency Med/Critical Care	83.33	69.21
Pain Management/Analgesia	72.73	70.56
RAW TOTAL	70.44	72.21

VTNE Domain (Official report dates changed) October 1--December 15, 2020	NSU Grad. Avg. Percent Correct*	National Avg. Percent Correct*
Pharmacy & Pharmacology	61.1%	73.37%
Surgical Nursing	52.94%	67.96%
Dentistry	58.33%	74.62%
Laboratory Procedures	70.59%	67.20%
Animal Care & Nursing	63.33%	70.68%
Diagnostic Imaging	45.45%	68.14%
Anesthesia	67.18%	65.83%
Emergency Med/Critical Care	66.67%	67.33%
Pain Management/Analgesia	63.64%	69.61%
RAW TOTAL	62%	69.37%

VTNE Domain (Official report dates changed) March 15—May 31, 2021	NSU Grad. Avg. Percent Correct*	National Avg. Percent Correct*
Pharmacy & Pharmacology	55.56%	69.58%
Surgical Nursing	55.88%	64.25%
Dentistry	62.50%	57.72%
Laboratory Procedures	50.00%	56.57%
Animal Care & Nursing	50.00%	67.43%
Diagnostic Imaging	54.55%	59.18%
Anesthesia	70.45%	72.38%
Emergency Med/Critical Care	70.83%	71.31%
Pain Management/Analgesia	68.18%	72.44%
RAW TOTAL	58.67%	66.12%

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Decision. In AC 2020-2021, the target was not met. Based on the analysis of the AC 2020-2021 results and to drive improvement in AC 2021-2022, faculty will add a focused lesson in the domains of Surgical Nursing, Dentistry, Diagnostic Imaging, Animal Care/Nursing, and Pharmacology since these domains have some of the largest discrepancies relative to the national average during this year's testing cycle. Focus will be placed in these areas during Animal Care and Health (VTEC 2600), Veterinary Hospital Technology II (VTEC 3200/3201), Veterinary Radiology (VTEC 2700/3701), Veterinary Clinical Pharmacology (VTEC 4090), Veterinary Technology Comprehensive Review (VTEC 4200) courses to improve knowledge and test scores. Intensive study and review will be required in the comprehensive review course (VTEC 4200) as well. Sample VTNE test questions will be incorporated into the course quizzes and exams to give students a better understanding of the testing format and material covered.

Comprehensive Summary of Key Evidence of Improvements Based on Analysis of Results

- PowerPoint presentations and videos were available for students to review prior to the lab period. Pre-lab quizzes were used to ensure that students reviewed the material and came to lab prepared.
- PowerPoint instruction, videos, and adjunctive material on class webpages that helped prepare them to complete the essential skills in Measures 1.2 and 2.2 as required by the AVMA-CVTEA.
- Students were randomly assigned to surgery lab (VTEC 3201) groups so they would be forced to work with different individuals in a team effort to complete a variety of anesthesia and surgery tasks on a weekly basis.
- VTEC 2900 (Veterinary Anatomy and Physiology – Fall course), VTEC 3010, and VTEC 3700 were each updated with new PowerPoint presentations and expanded subject information by the new faculty for use in the hybrid teaching format that was employed due to COVID.
- Quizzes were implemented, and individual student outcomes were monitored closely for early intervention with recommended study groups and/or tutoring or time spent with instructors during office hours, referral for individual counselling, and encouragement to spend the necessary time with the study material.
- Faculty implemented more intensive instruction and the use of case studies in teaching, as well as early intervention when students are not performing well.
- Stringent requirements for laboratory attendance and completion of skills to earn a passing grade were implemented. Students who successfully completed these laboratory courses performed all skills as required by the AVMA-CVTEA (American Veterinary Medical Association - Committee for Veterinary Technician Education and Activities).
- Dentistry and Pain Management/Analgesia were added as focus topic. Students were able to exceed the national average in those domains in one testing period.

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Plan of Action Moving Forward

- Quizzes will be adjusted to promote class attendance and regular review of the material.
- There will be reordering of material to coincide with the material covered in the VTEC 1031 laboratory.
- Students that score <65% on the initial exam will be contacted by the instructor to discuss deficiencies and a plan to improve understanding. Students with an average <70% average at midterm will also be contacted to recommend a meeting with the instructor during office hours to discuss problems and devise a plan to enhance student success.
- Measure 1.2 will be changed to require students to average 70% or higher in the course and demonstrate the required 71 technical skills.
- Students will have hands-on individualized instruction with a student to instructor ratio of <8:1, documentation of each student's attainment of skills, and the requirement that each student must attain the required skills to receive a successful grade of course completion.
- Attendance of each laboratory session as scheduled or by make-up sessions will be required to ensure that each student attains the required skills.
- Early intervention will be established for students that score <65% on the initial exam.
- Students with a course average of <70% at midterm will be contacted to recommend a meeting with the instructor during office hours to discuss problems and devise a plan to enhance student success.
- Recordings of instructional videos of an instructor performing various types of calculations will be available to students for reference and review.
- There will be a restructuring of the material covered in VTEC 2060 and 3010 to enhance comprehension.
- In VTEC 3010, it will be recommended that students organize the material into a chart format throughout the semester to aid in studying and comprehension. Examples of this will be provided throughout the semester.
- Measure 2.2 will be changed to require students to average 70% or higher in the course and demonstrate the required 71 technical skills.
- Program instructors will invest in hands-on instruction of skills and improve upon the competency of those skills by incorporating repetition of those skills that are valued by employers of graduates into upper-level labs.
- Faculty will incorporate requirements encouraging student ownership for their individual outcomes, assess students based on reliability in the care of animals, and require attending labs to complete required skills in the veterinary technology curriculum.

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- Students will be encouraged to take Comprehensive Review (VTEC 4200) to help them succeed in passing the VTNE by reviewing didactic knowledge, domain structure/weighting, and using sample test questions from VTNE review books.
- Instructors will incorporate sample VTNE review questions into the appropriate courses that are taken by all students to ensure that they have as much understanding and exposure to examples of the VTNE as possible throughout the curriculum.
- Faculty will add a focused lesson in the domains of Surgical Nursing, Dentistry, Diagnostic Imaging, Animal Care/Nursing, and Pharmacology since these domains have some of the largest discrepancies relative to the national average during this year's testing cycle. Focus will be placed in these areas during Animal Care and Health (VTEC 2600), Veterinary Hospital Technology II (VTEC 3200/3201), Veterinary Radiology (VTEC 2700/3701), Veterinary Clinical Pharmacology (VTEC 4090), Veterinary Technology Comprehensive Review (VTEC 4200) courses to improve knowledge and test scores.
- Intensive study and review will be required in the comprehensive review course (VTEC 4200) as well.