Assessment Cycle 2024 – 2025

Program: (AD) Veterinary Technology Program (725)

Department of Veterinary Technology

School of Science, Technology, Engineering, and Math (STEM)

College of Arts and Sciences

Prepared by: Dr. Douglas Landry, Dept. Head & Veterinarian **Date: 06/18/2025**

Approved by: Francene J. Lemoine **Date: 06/18/2025**

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: 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 Science, Technology, Engineering, and Math (STEM) Mission: The School of Science, Technology, Engineering, and Math (STEM) at Northwestern State University serves to create a collaborative environment for natural and applied science education that inspires students and faculty to engage in an interdisciplinary approach to developing strong analytical skills in interpersonal communication, critical and creative thinking, research, and data literacy as they become lifelong learners who are prepared for an ever-changing, global STEM community.

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.

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.

Northwestern State University's Veterinary Technology Program continues to be fully accredited by the AVMA-CVTEA pending favorable review of follow-up reporting until its next site visit in 2027.

Student Learning Outcomes:

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

Assessment Cycle 2024 – 2025

Course Map: Tied to course syllabus objectives/outline.

VTEC 1030-1031: Introductory Veterinary Technology II Lecture/Laboratory (61 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 was not met.

Analysis. In AC 2023-2024, the target was not met. The faculty discussed commonly missed questions after exams to clarify any misunderstanding. The students were able to ask questions and refine their skills for future assignments. The commonly missed questions were used in future exams to ensure that students truly learned the concepts rather than just moving on. The instructor reached out to underperforming students and recommended attending student hours with the instructor, outside the classroom, or FLAME (Faculty Led Assistance in My Education) hours. That cohort of students struggled with the content and/or study skills necessary to be successful in the course with only 52% of students meeting the measure.

Based on the analysis of the AC 2023-2024 results, the faculty implemented the following changes in AC 2024-2025. Reading assignments and assessments were given for homework to help promote the study and retention of material outside of class hours. Students were able to earn service hours by volunteering for additional animal care hours outside of the normal laboratory requirements. This was in the hope of promoting hands-on learning and experience with animals. FLAME hours continued to be offered weekly, and students were encouraged to attend student hours with their instructor(s).

As a result of these changes in AC 2024-2025, the target was not met; however, there was dramatic improvement with 82% of students meeting the measure this year. There was increased compliance of completing required service hours that enhance animal behavior and husbandry skills necessary for veterinary technology students. Assessments that ensured the completion of reading assignments allowed students to be better prepared for in-class discussions and developed improved retention of material.

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2023-2024	VTEC 1030	23	12	52%
2024-2025	VTEC 1030	33	27	82%

Decision. In AC 2024-2025, the target was not met. Based on the analysis of the AC 2024-2025 results, the following changes will be made to drive improvement in AC 2025-2026. The faculty will implement a new attendance tracker visible to students to promote better course attendance. The instructor will also provide weekly reminders to students to complete the required reading assignments. This will improve compliance and minimize loss of points associated with this grade item that will allow students to have a better foundation of knowledge that contributes to discussion of the material in class.

Measure 1.2. (Direct – Skill / Ability): Eighty-five percent (85%) of students completing VTEC 1031 will each demonstrate the ability to complete 61 required technical skills following standard criteria established for each skill (document following) and average 70% or higher scores on the course quizzes and examinations. 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 was met.

Analysis. In AC 2023-2024, the target was met with 100% of students meeting the measure. The faculty generated more educational videos that pertained to the individual labs and posted them in the course management system to supplement the book knowledge.

Based on the analysis of the AC 2023-2024 results, the faculty implemented the following changes in AC 2024-2025 to drive the cycle of improvement. The faculty reviewed key knowledge from the previous week's lab with students in the successive lab period to increase repetition and enhance the retention of this knowledge throughout the curriculum. A new canine model with anatomically correct limb articulation was utilized in certain labs to enhance the lab and create more realistic demonstrations. There were four students to each faculty member in the lab sections. This is far below the maximum 8:1 student-to-instructor ratio imposed by the AVMA. There was slight regression, with 96% of students achieving the measure. Only one student did not meet the measure. Upon deeper analysis, this individual struggled overall academically as the student failed all courses taken that semester.

As a result of these changes in AC 2023-2024, the target was met.

Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2023-2024	VTEC 1031	18	18	100%
2024-2025	VTEC 1031	28	27	96%

Decision. In AC 2024-2025, the target was met. Based on the analysis of the AC 2024-2025 results, the following changes will be made to drive improvement in AC 2025-2026. A fun and interactive "Food Fight" component will be implemented into certain labs for students to practice skills such as fine needle aspiration, skin scrapes, and dermatophyte testing on lemons, kiwis, and Jello respectively to simulate these procedures on common food items prior to performing them on animals or other models. Students will continue to have hands-on, individualized instruction with a student-to-instructor ratio of <8:1 with documentation of each student's attainment of skills as mandated by the AVMA. Students must attain the required skills and knowledge base that pertains to these skills to receive a passing grade of course completion, and attendance of each laboratory session is mandatory. Any missed labs will be made up with instructors to ensure completion of essential skills.

SLO 2. Students completing the second/third year sequence of courses in Veterinary Technology will demonstrate the development of required didactic knowledge base and will demonstrate the 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: Diseases of Animals Lecture
VTEC 3200-3201: Veterinary Hospital Technology II Lecture/Laboratory (69 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-five percent (85%) of students completing the course(s) will be able to demonstrate a basic understanding by averaging scores of 70% or higher on the examinations.

Finding. Target was met.

Analysis. In AC 2023-2024, the target was met. For VTEC 2060 (Veterinary Pharmacological Calculations), there was a review of homework/practice problems during the lectures after students had time to complete them. In VTEC 3010 (Diseases of Animals), dental diseases were added to the course to increase the volume of dental information presented in the curriculum since it is a domain that NSU students have trailed in the national average on the VTNE (Veterinary Technician National Exam). In VTEC 3200 (Veterinary Hospital Technology II), PowerPoints were updated and reorganized to better correspond with the updated textbook that was available for the course. The anesthetic table was expanded to include more data, such as reversal

agents and pain management/analgesia columns. In VTEC 3700 (Veterinary Radiology), faculty introduced case studies into the lectures that tied clinical scenarios to the topics being discussed. Eighty-nine percent (89%) of students were able to meet the measure across these 5 courses.

Based on the analysis of the AC 2023-2024 results, the faculty implemented the following changes in AC 2024-2025. For VTEC 2060 (Veterinary Pharmacological Calculations), a new course format and textbook were implemented to help monitor students' understanding throughout the semester. The format added in-class questions that are worked out together in a group setting. Homework was assigned weekly, covering topics from the previous week. A review day was also added to allow students to work on a formula sheet together that could be used during the final exam. In VTEC 2600, a Nutrition Expert Certification by Hill's Pet Nutrition was implemented to give additional certification and instruction covering the importance of pet nutrition. Additionally, a group study project was implemented with students grading their own animal's nutrition status based on body condition score and calculating adjustments in diet as necessary. In VTEC 3010 (Diseases of Animals), homework was given where students listed the causative agents and the category that each infectious organism falls into to enhance memorization of this material since they are common questions on course and board exams. In VTEC 3200 (Veterinary Hospital Technology II), students filled out handwritten tables of their anesthetic drug charts to ensure that they were completing them. Common orthopedic procedures were added to the surgery lectures to improve basic comprehension of the wide variety of orthopedic procedures that are used in veterinary medicine. In VTEC 3700 (Veterinary Radiology), a new textbook and PowerPoints were added to help increase understanding of radiology. The online assessment portion of the eBook allowed for the tracking of student comprehension of complex radiological concepts as they are covered by both the instructor and the student.

Overall, 90% of students met the measure, and every course exceeded the target except VTEC 2060. This course is primarily composed of first-year students where many are still trying to establish proper study and time management skills. However, there was improvement with 78% of students meeting the measure compared to 68% the prior year. VTEC 2600 and VTEC 3700 surpassed the measure but regressed slightly compared to last year with 92% and 94% meeting the measure, respectively. There was an individual student enrolled in both of these courses that experienced some personal issues late in the semester which had a negative impact on their final grade. VTEC 3200 showed equal performance compared to the previous year's assessment with 100% of students meeting the measure. There was improvement in VTEC 3010 with 100% of students meeting the measure. These courses are primarily composed of upper-level students who have established the necessary study skills and understand the commitment needed to be successful in the program.

As a result of these changes in AC 2024-2025, the target was met.

Assessment Cycle 2024 – 2025

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2023-2024	VTEC 2060	25	17	68%
2023-2024	VTEC 2600	17	17	100%
2023-2024	VTEC 3010	14	13	93%
2023-2024	VTEC 3200	13	13	100%
2023-2024	VTEC 3700	14	14	100%
2023-2024	TOTAL	83	74	89%

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2024-2025	VTEC 2060	37	29	78%
2024-2025	VTEC 2600	13	12	92%
2024-2025	VTEC 3010	16	16	100%
2024-2025	VTEC 3200	16	16	100%
2024-2025	VTEC 3700	17	16	94%
2024-2025	TOTAL	99	89	90%

Decision. In AC 2024-2025, the target was met. Based on the analysis of the AC 2024-2025 results, in AC 2025-2026, the faculty will implement the following changes to drive the cycle of improvement. For VTEC 2060 (Veterinary Pharmacological Calculations), additional weekly homework assignments and a practice comprehensive final exam will be implemented. This will differ from the actual final exam but will allow students to identify their areas of weakness to focus their study on these topics. For VTEC 2600 (Animal Care and Health), lectures on current food trends and fads in animal nutrition and pet food labeling will be added to expand knowledge in these areas. For VTEC 3010, lectures on Highly Pathogenic Avian Influenza (HPAI) will be added considering the current epidemic and lectures on swine infectious diseases will be expanded to ensure that students are prepared for their board exam. Students get minimal hands-on swine experience due to Louisiana having a relatively small domestic

swine population. For VTEC 3200 (Veterinary Hospital Technology 2 – Anesthesia), some case-based examples of problem anesthetic patients will be added and discussed in class so students can learn to think through these cases and learn to apply the anesthetic knowledge that is presented in the course. This should also enhance their client communication skills as they work through clinical scenarios. For VTEC 3700 (Veterinary Radiology), videos showing equine limb techniques and small animal dental radiographic positioning will be added to Moodle to assist students in mastering these topics.

Measure: 2.2. (Direct – Skill / Ability): One hundred percent (100%) of students completing VTEC 3201 will demonstrate mastery of 69 animal medical and surgical nursing and anesthetist skills through participation in live animal surgical procedures laboratories and average 70% or higher scores on the course quizzes and examinations. One hundred percent (100%) of students completing VTEC 3701 will demonstrate the ability to complete 11 technical skills pertaining to diagnostic imaging and average scores of 70% or higher on the course quizzes and examinations. 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 not met.

Analysis. In AC 2023-2024, the target was met. Based on the analysis of the AC 2023-2024 results, the faculty implemented the following changes in AC 2024-2025. In VTEC 3201, students had their surgery notebooks examined for a grade prior to beginning live animal surgeries to ensure that they were prepared and had the necessary information needed to be successful. The canine dental technician model was used in the preliminary surgery labs in VTEC 3201 to give students more experience with dental prophylaxis procedures prior to performing these procedures on live animals. In VTEC 3701, the dental technician model was used to train students to perform canine dental radiography techniques on a more realistic model prior to performing dental radiographs on live animals. One hundred percent (100%, or 26/26) of students performed all required skills and completed the courses with a passing grade.

As a result of these changes, in AC 2024-2025, the overall target was not met. Overall, 97% of students met the measure by passing the course and completing all essential skills. In VTEC 3701, 94% of the students achieved the measure but one student failed the course due to the inability to attend required skills labs because of personal issues. However, students in VTEC 3201 did meet the target with 100% of students achieving the measure. Students enrolled in these laboratories are upper-level students in the final stages of their degree. They generally understand the work ethic, process, and skills that are needed to be successful in these courses.

Assessment Cycle 2024 – 2025

Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2023-2024	VTEC 3201	13	13	100%
2023-2024	VTEC 3701	13	13	100%
2023-2024	TOTAL	26	26	100%

Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2024-2025	VTEC 3201	16	16	100%
2024-2025	VTEC 3701	17	16	94%
2024-2025	TOTAL	33	32	97%

Decision. In AC 2024-2025, the target was not met. Based on the analysis of the AC 2024-2025 results, the following changes will be made to drive improvement in AC 2025-2026. In VTEC 3201, a video will be posted for students providing them with an example of a day in live animal surgery labs. A mock surgery lab will also be implemented prior to beginning live animal surgery to better prepare students to handle the multitude of steps and skills necessary to successfully complete these labs. In VTEC 3701, additional guided lab time will be built in for equine limb and dental radiography to focus on repetition, muscle memory, and troubleshooting common radiographic errors. Demonstration videos for equine and dental techniques will also be made available via Moodle so students can review steps outside of lab hours. An equine limb positioning lab using our equine skeletal model prior to live animal radiographs will also be added. Students have struggled with these areas since they are technically challenging and limited in practice time due to equipment access and safety protocols.

SLO 3. Following completion of other required courses entitled Veterinary Technology (VTEC), each student must enroll in a 12-credit hour internship practicum with 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 their practicum. 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 95% on each item.

Course Map: Tied to course syllabus objectives/outline.

VTEC 2900: Veterinary Internship Practicum

Assessment Cycle 2024 – 2025

Measure 3.1. (Direct – Skill / Ability): For student's enrolled in VTEC 2900, their 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 ratings of good-to-excellent will be earned for 95% or more of the student's skills.

Finding. Target was met.

Analysis. In AC 2023-2024, the target was met. Instructors adjusted the grading rubric for VTEC 3201 to place more weight on grading skills during the actual anesthesia, dentistry, and surgical procedures that were performed during the second half of the semester. Students were provided with patients and cases that enabled the repetition of essential skills in Measures 1.2 and 2.2 as required by the AVMA-CVTEA. Supervisors at internship sites then report back to the program on the evaluation of these skills and others that are used in a clinical environment.

Based on the analysis of the AC 2023-2024 results, the faculty implemented the following changes in AC 2024-2025 to drive the cycle of improvement. Students in VTEC 3191 were required to work in teams to perform animal restraint and venipuncture to collect blood samples for the clinical pathology laboratory under the supervision of instructors. This was completed again in VTEC 3201 the following semester. Regularly repeating these skills should have improved their competence. Videos showing proper techniques for running blood in the program's CBC and blood chemistry analyzers were made and posted in VTEC 3191 course management software for student reference. A new articulating canine teaching model and a canine dental technician model were used in VTEC 1011, 1031, 3201, and 3701 to enhance the teaching of essential skills.

As a result of these changes in AC 2024-2025, the target was met. Students received good to excellent ratings from supervisors 99.5% of the time. This far exceeded the goal of 95% in the measure. Fewer skills were assessed overall in AC 2024-2025 (2099 vs. 3236) since fewer students enrolled in internships compared to the previous year. Fewer skills were rated as excellent (65.1% vs. 74.8) compared to the previous year. There was a comparable number of skills rated poorly in both years (0.5% vs. 0.4%).

Assessment Year	VTEC 2900	Excellent	Good	Poor
2023-2024	# ratings of skills performance	2422	800	14
2023-2024	% ratings of skills performance	74.8%	24.7%	0.4%

Assessment Year	VTEC 2900	Excellent	Good	Poor
2024-2025	# ratings of skills performance	1366	722	11
2024-2025	% ratings of skills performance	65.1%	34.4%	0.5%

Decision. In AC 2024-2025, the target was met. Based on the analysis of the AC 2024-2025 results, the faculty will implement the following changes to drive the cycle of improvement in AC 2025-2026. For VTEC 1031, students will be required to demonstrate and teach a variety of skills that they have already learned during the semester to other classmates as a way to review prior to the major exams. In VTEC 3201, the program purchased a new canine model used for cardiopulmonary resuscitation (CPR) and will integrate it into CPR demonstration labs. Students will then use this new and enhanced model to demonstrate competency in this essential skill. These additions will improve a variety of skills performance. The program instructors will invest in hands-on instruction of skills and aid in improving upon the students' competency of those skills by incorporating repetition of those skills into all possible upper-level laboratories.

Measure 3.2. (Indirect – Attitude / Reliability): Each student enrolled in VTEC 2900 is evaluated by the supervisor in the veterinary clinical 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/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 student.

Findings: Target was met.

Analysis. In AC 2023-2024, the target was met. The faculty communicated the need and expectations for a high-quality work ethic and adjusted the grading rubric in VTEC 3201 to place a larger emphasis on teamwork, work ethic, and communication skills/client education. The subjective characteristics of students were rated as either average or above average for 96% of the criteria.

Based on the analysis of the AC 2023-2024 results, the faculty implemented the following changes in AC 2024-2025. The grading rubric for VTEC 1011 and 1031 included characteristics such as dependability, reliability, and maturity that tie in with being punctual, present in laboratories, and with proper materials/dress necessary for the laboratory. Communication skills were assessed and contributed to grades in VTEC 3201 and 4200. Group projects were incorporated into VTEC 2060 and 2600 to foster the ability of students to work with other individuals.

As a result of these changes in AC 2024-2025, the target was met. All students (100%) were rated average or above average in all subjective characteristics. This far exceeds the measure and is an improvement of the 4% below average ratings the previous year. However, students achieved a lower percentage of above average rating characteristics (57% vs. 76%) in AC 2024-2025 compared to the previous year.

Assessment Year	VTEC 2900	Above Average	Average	Below Average
2023-2024	# ratings of subjective characteristics	130	34	7
2023-2024	% ratings of subjective characteristics	76%	20%	4%

Assessment Year	VTEC 2900	Above Average	Average	Below Average
2024-2025	# ratings of subjective characteristics	66	50	0
2024-2025	% ratings of subjective characteristics	57%	43%	0%

Decision. In AC 2024-2025, the target was met. Based on the analysis of the AC 2024-2025 results, the following changes will be made to drive improvement in AC 2025-2026. In VTEC 1031, lab groups/partners will shift throughout the semester to encourage communication between a variety of individuals and enhance the concept of teamwork to prepare students to work with a wide array of individuals. In VTEC 1011, ethics topics are discussed, and ethics skits/demonstrations will be conducted by students to enhance ethics knowledge, communication skills, and allow discussion on common ethics topics in veterinary medicine. Points in all labs will be tied to attendance, punctuality, and following rules to enhance dependability, reliability, and work ethic that are highly valued in the workplace.

SLO 4. Students will demonstrate proficiency in Veterinary Technology by earning passing scores the first time taking 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, with 425 being a passing score.

Assessment Cycle 2024 – 2025

School reports are provided by the test administrators for each examination cycle and for the most recent three-year period. In the past, the three-year period was based on an academic calendar year ending on June 30. However, the AVMA-CVTEA has mandated changes this year. The three-year reporting period must be changed to a calendar year ending on December 31 and data provided to the program director of each school has changed accordingly.

Finding. Target was met.

AC 2023-2024: Improvement and target met. Northwestern State graduates had a 76.7% pass rate over the last 3 years; the national average pass rate was 66.3%.

AC 2024-2025: Regression but target met. Northwestern State graduates had a 69.7% pass rate over the last 3 years; the national average pass rate was 64.9%.

Analysis. In AC 2023-2024, the target was met. All students were encouraged to enroll in VTEC 4200 Comprehensive Review in preparation for the VTNE. Instructors incorporated sample VTNE questions into course material and exams as it related to information covered in the course. Computer-based exams were used in some courses to allow students to become more accustomed with this testing modality since it is how the VTNE is administered.

Based on the analysis of the AC 2023-2024 results, in AC 2024-2025, courses were updated with new information as needed since veterinary medicine is an ever-evolving field. Faculty encouraged students applying for licensure through the state of Louisiana to prepare and take the VTNE soon after completing all VTEC courses other than internships. Program faculty have found that students who delay taking the VTNE do not perform as well. Ultimately, it is up to the student to commit to the time and effort in preparation for a very comprehensive exam that covers material from the entire curriculum on a wide range of species.

As a result of these changes in AC 2024-2025, the target was met. When the general trend is analyzed, one sees that the **3-year national pass rate has decreased from 69% to 64.9%** over each of the last three cycles. While **Northwestern State's graduates' pass rates regressed from 76 to 70% during the same time periods, Northwestern State's program graduates continue to exceed the national VTNE pass rate average** on a three-year timeframe.

VTNE July 2020—June 2023	**Pass**	**Fail**
NSU graduates' performance (#)	19	6
NSU graduates' performance (%)	76%	24%
National average (%)	69.0%	31.0%

VTNE July 2021— June 2024	**Pass**	**Fail**
NSU graduates' performance (#)	23	7
NSU graduates' performance (%)	76.7%	23.3%

National average (%)	66.3%	33.7%

VTNE January 2022— December 2024	Pass	Fail
NSU graduates' performance (#)	23	10
NSU graduates' performance (%)	69.7%	30.3%
National average (%)	64.9%	35.1%

*** AVMA-CVTEA has mandated the change in 3-year reporting dates to reflect the calendar year cycle instead of the academic calendar. Data is no longer available in the academic calendar format.**

Decision. In AC 2024-2025, the target was met. Based on the analysis of the AC 2024-2025 results and to drive improvement in AC 2025-2026, all students will be encouraged to enroll in VTEC 4200 Comprehensive Review in preparation for the VTNE even if it is not required for their degree. Instructors will incorporate sample VTNE questions into course material and exams as they relate to information covered in the course. A new and updated VTNE candidate handbook will be made available to students to ensure that they completely understand the strict process that the VTNE requires in order to be successful. New practice VTNE exams from PSI Services will be made available to students to replicate an actual exam so students can analyze where they stand in preparation and mastery of individual domains to allow more focused study in deficient areas. These practice exams will be recommended but not required as the cost is $50 for each exam.

Measure 4.2. (Direct – Knowledge): Ten 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 recently 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 scores for each domain subject. A change has been made by the VTNE testing agency (American Association of Veterinary State Boards) to allow four testing windows to be conducted annually beginning in 2025 compared to three previously.

Finding. Target was not met.

Analysis. In AC 2023-2024, the target was not met. Faculty added focused lessons in the domains of Dentistry, Diagnostic Imaging, and Pharmacy/Pharmacology since these domains have the largest discrepancies relative to the national average. Focus was placed in these areas during Pharmacological Calculations (VTEC 2060), Veterinary Clinical Pharmacology (VTEC 4090), Veterinary Hospital Technology II (VTEC 3200/3201), Veterinary Radiology (VTEC 3700/3701), and Veterinary Technology Comprehensive Review (VTEC 4200) courses to improve didactic knowledge and test scores. Dental disease lectures were added to Diseases of Animals (VTEC 3010). Case studies were added to Veterinary Radiology (VTEC 3700) to show students how the lecture material pertains to sample clinical cases. The effort was made to allow

students to radiograph patients with abnormalities as they were available in the Veterinary Radiology Lab (VTEC 3701). Sample VTNE test questions relating to these domains were incorporated into the course quizzes and exams to give students a better understanding of the testing format and material covered.

Based on the analysis of the AC 2023-2024 results, in AC 2024-2025, faculty added focused lessons in the domains of Communication/Professional Support, Dentistry, and Diagnostic Imaging since these domains had the largest discrepancies relative to the national average. Lectures on professional communication with the veterinary team and client interaction were expanded in VTEC 1010 and 1030 – Introduction to Veterinary Technology 1 & 2. The Canine Dental Technician Model was incorporated into student laboratories to enhance understanding of dental radiography and comprehensive oral health assessment and treatment in VTEC 3201/3701 – Veterinary Hospital Technology 2 and Veterinary Radiology. A new interactive textbook with online assessments was implemented into VTEC 3700/3701 – Veterinary Radiology to enhance student comprehension of diagnostic imaging.

As a result of these changes in AC 2024-2025, the target was not met. However, NSU students did exceed the national average in three of the domains for the 2024 calendar year, including Surgical Nursing, Laboratory Procedures, and Emergency Medicine/Critical Care. Dentistry, Pain Management/Analgesia, Pharmacy & Pharmacology, Anesthesia, and the Raw Total were within 4% of the national average. Dentistry score improved by 3% compared to the previous year. Communication/Professional Support, Diagnostic Imaging, and Animal Care/Nursing were the domains with the largest deficit (>5%) compared to the national average. Due to the changes in reporting from the American Association of Veterinary State Boards (AAVSB), we did not have national averages for the most recent spring 2025 testing cycle to compare scores. However, the individual testing during this cycle did extremely well in all domains and significantly exceeded the national averages if compared to the 2024 calendar year averages.

VTNE Domain July 15— August 15, 2023	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	61.11%	61.67%
Surgical Nursing	76.47%	71.81%
Dentistry	56.67%	62.68%
Laboratory Procedures	78.82%	67.06%
Animal Care & Nursing	71.33%	67.10%
Diagnostic Imaging	74.55%	66.43%
Anesthesia	70.91%	66.53%
Emergency Med/Critical Care	70.00%	66.29%
Pain Management/Analgesia	72.73%	69.47%
RAW TOTAL	70.53%	66.60%

Assessment Cycle 2024 – 2025

VTNE Domain November 15--December 15, 2023	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	80.00%	61.04%
Communication / Professional Support	85.71%	70.49%
Surgical Nursing	85.00%	64.60%
Dentistry	90.00%	65.80%
Laboratory Procedures	78.57%	59.97%
Animal Care & Nursing	86.67%	65.04%
Diagnostic Imaging	77.78%	68.89%
Anesthesia	95.00%	63.34%
Emergency Med/Critical Care	90.00%	63.79%
Pain Management/Analgesia	90.00%	65.79%
RAW TOTAL	86.00%	64.25%

VTNE Domain March 15—April 17, 2024	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	60.0%	61.79%
Communication / Professional Support	31.43%	61.8%
Surgical Nursing	73.0%	66.36%
Dentistry	58.0%	63.36%
Laboratory Procedures	65.71%	56.60%
Animal Care & Nursing	60.67%	65.49%
Diagnostic Imaging	48.89%	64.19%
Anesthesia	64.00%	65.34%
Emergency Med/Critical Care	58.0%	66.65%
Pain Management/Analgesia	54.0%	63.22%
RAW TOTAL	60.27%	63.8%

VTNE Domain AC 2023-2024	**NSU Grad. Avg. Percent Correct**	**National Avg. Percent Correct**
Pharmacy & Pharmacology	**62.32%**	**61.51%**
Communication / Professional Support	**40.48%**	**66.74%**
Surgical Nursing	**75.67%**	**68.42%**
Dentistry	**60.3%**	**63.77%**
Laboratory Procedures	**72.84%**	**62.58%**
Animal Care & Nursing	**67.88%**	**66.12%**
Diagnostic Imaging	**63.18%**	**66.66%**
Anesthesia	**69.96%**	**65.31%**
Emergency Med/Critical Care	**66.36%**	**65.62%**
Pain Management/Analgesia	**65.79%**	**66.96%**
RAW TOTAL	**67.27%**	**65.26%**

Assessment Cycle 2024 – 2025

VTNE Domain July 15— August 15, 2024	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	85%	65.89%
Communication / Professional Support	28.57%	61.47%
Surgical Nursing	75%	68.9%
Dentistry	100%	69.44%
Laboratory Procedures	78.57%	59.05%
Animal Care & Nursing	76.67%	67.78%
Diagnostic Imaging	66.67%	65.35%
Anesthesia	85%	69.6%
Emergency Med/Critical Care	70%	64.5%
Pain Management/Analgesia	90%	63.1%
RAW TOTAL	78%	66.25%

VTNE Domain November 15--December 15, 2024	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	57.78%	62.68%
Communication / Professional Support	60.32%	63.12%
Surgical Nursing	65.56%	66.37%
Dentistry	61.11%	59.16%
Laboratory Procedures	57.94%	59.24%
Animal Care & Nursing	58.52%	63.98%
Diagnostic Imaging	60.49%	62.40%
Anesthesia	57.22%	64.37%
Emergency Med/Critical Care	62.22%	60.87%
Pain Management/Analgesia	58.89%	63.58%
RAW TOTAL	59.78%	63.05%

Assessment Cycle 2024 – 2025

VTNE Domain **Calendar Year 2024** • **New reporting timeframe mandated by AVMA-CVTEA (accrediting agency)** • **Data no longer available in academic calendar format**	**NSU Grad. Avg. Percent Correct**	**National Avg. Percent Correct**
Pharmacy & Pharmacology	**60.88%**	**63.85%**
Communication / Professional Support	**52.10%**	**61.90%**
Surgical Nursing	**69.41%**	**67.34%**
Dentistry	**63.53%**	**64.97%**
Laboratory Procedures	**61.34%**	**58.26%**
Animal Care & Nursing	**60.78%**	**65.95%**
Diagnostic Imaging	**57.52%**	**64%**
Anesthesia	**62.65%**	**66.86%**
Emergency Med/Critical Care	**64.12%**	**63.79%**
Pain Management/Analgesia	**61.18%**	**64%**
RAW TOTAL	**62.08%**	**64.56%**

VTNE Domain February 15 – April 15, 2025 ***New testing window dates**	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	75.00%	Not available
Communication / Professional Support	71.43%	Not available
Surgical Nursing	85.00%	Not available
Dentistry	80.00%	Not available
Laboratory Procedures	78.57%	Not available
Animal Care & Nursing	70.00%	Not available
Diagnostic Imaging	88.89%	Not available
Anesthesia	70.00%	Not available
Emergency Med/Critical Care	80.00%	Not available
Pain Management/Analgesia	80.00%	Not available
RAW TOTAL	76.67%	Not available

- **Due to changes in the reporting system for the AAVSB, national averages for individual testing cycles are not available.**

Decision. In AC 2024-2025, the target was not met. Based on the analysis of the AC 2024-2025 results and to drive improvement in AC 2025-2026, faculty will add focused lessons in the domains of Communication/Professional Support and Diagnostic Imaging since these domains have the largest discrepancies relative to the national average during this year's testing cycle. As previously noted in VTEC 1011 and 1031, communication skills will be enhanced by shifting lab partners/groups during the semester to encourage communication with a wide variety of individuals.

Demonstrations/presentations relating to ethical standards and review of essential skills will increase retention of the material as well as improve speaking skills. As previously noted in VTEC 3700 (Veterinary Radiology), demonstration videos showing equine limb radiographic techniques and small animal dental radiographic positioning will be added to Moodle to assist students in mastering these topics. In VTEC 3701, additional guided lab time will be built in for equine limb and dental radiography to focus on repetition, muscle memory, and troubleshooting common radiographic errors. An equine limb positioning lab using our equine skeletal model prior to live animal radiographs will also be added. These additions will enhance knowledge and skills related to Diagnostic Imaging.

Comprehensive Summary of Key Evidence of Improvements Based on Analysis of Results: The following reflects all the changes implemented to drive the continuous process of seeking improvement in AC 2024-2025. These changes are based on the knowledge gained through the analysis of AC 2023-2024 results.

- Reading assignments and assessments were given to students in VTEC 1030.
- Volunteer service hours were offered to students outside of lab requirements to promote hands-on learning and experience with animals in VTEC 1030 by volunteering for additional animal care hours outside of the requirements for lab.
- FLAME (Faculty Led Assistance in My Education) hours were offered weekly by instructors.
- Instructors reviewed knowledge from the previous week's lab with students as time was available in VTEC 1031.
- A new course format and textbook were implemented in VTEC 2060 that added in-class questions that were worked out together in a group setting. Homework was assigned weekly, and students worked on a formula sheet during a review day at the conclusion of the semester that could be used during the final exam.
- A Nutrition Expert Certification by Hills was incorporated into VTEC 2600 to give additional certification and instruction covering pet nutrition.
- Students conducted a group study project in VTEC 2600 analyzing the nutrition status of animals based on body condition score and calculating dietary adjustments, as necessary.
- Students received homework in VTEC 3010 requiring the listing of causative agents and the categorization of each disease-causing infectious agent that was covered in the course.
- Students turned in handwritten copies of their anesthetic drug charts for points in VTEC 3200 to ensure completion and have it to assist with their studying, proper categorization, and comprehension of the anesthetic agents.
- Common orthopedic procedures were added to the surgery lectures in VTEC 3200 to improve basic comprehension of the wide variety of orthopedic procedures that are used in veterinary medicine.

- A new textbook and updated PowerPoints were used in VTEC 3700 to help increase understanding of radiology. The online assessment portion of the eBook allowed tracking of student comprehension of complex radiological concepts as they are covered.
- Surgery notebooks were examined for a grade prior to beginning live animal surgeries in VTEC 3201 to ensure that students were prepared and had the necessary information needed to be successful.
- A canine dental technician model was used by students in VTEC 3201 and 3701 to enhance student understanding of dental prophylaxis procedures and dental radiography techniques.
- A new canine model with anatomically correct limb articulation was used in VTEC 1011, 1031, and 3701 to enhance teaching of positioning and clinical restraint skills.
- Students in VTEC 3191 were required to work in small groups to perform animal restraint and perform venipuncture to collect blood for the clinical pathology lab under the supervision of instructors.
- Videos showing proper technique for running blood in the CBC and blood chemistry analyzers were made and posted in VTEC 3191 for student reference.
- The grading rubric for VTEC 1011 and 1031 was changed to include characteristics such as dependability, reliability, and maturity that tie in with being punctual, present in labs with proper materials/clothing necessary for lab.
- Group projects were incorporated into VTEC 2060 and 2600 to improve the ability of students to work with other individuals to foster teamwork.
- Lectures on professional communication with the veterinary team and client interaction were expanded in VTEC 1010 and 1030.
- Faculty added focused lessons in the domains of Communication/Professional Support, Dentistry, and Diagnostic Imaging since these domains have the largest discrepancies relative to the national average during last year's testing cycle. Focus was placed on these areas in VTEC 1010, 1030, 3200, 3201, 3700, 3701 courses to improve didactic knowledge and test scores in these domains.

Plan of Action Moving Forward:

Program faculty examined the evidence and results of data analysis from AC 2024-2025 and will take steps to continue to improve student learning in AC 2025-2026:

- The faculty will implement a new attendance tracker visible to students to promote better course attendance in VTEC 1030 (Intro to Veterinary Technology 2).
- Students will receive weekly reminders to complete the required reading

assignments in VTEC 1030.

- A fun and interactive “Food Fight” component will be implemented into certain VTEC 1031 (Intro to Veterinary Technology 2 Lab) labs for students to practice skills such as fine needle aspiration, skin scrapes, and dermatophyte testing on a variety of food items to simulate these required skill procedures.

- Students will be required to demonstrate and teach classmates a variety of skills that they have already learned during the semester as a way to review prior to the major exams in VTEC 1031.

- Additional weekly homework assignments and a practice comprehensive final exam will be implemented in VTEC 2060 (Veterinary Pharmacological Calculations).

- Lectures on current food trends and fads in animal nutrition and pet food labeling will be added to expand knowledge in these areas in VTEC 2600 (Animal Care and Health).

- Lectures on Highly Pathogenic Avian Influenza (HPAI) will be added considering the current epidemic and lectures on swine infectious diseases will be expanded in VTEC 3010 (Diseases of Animals).

- Case-based examples of problem anesthetic patients will be added and discussed in class so students can better understand how to think through these cases and learn to apply the anesthetic knowledge that is presented in VTEC 3200 (Veterinary Hospital Technology 2 – Anesthesia).

- A video will be posted for students providing them with an example of a day in live animal surgery in VTEC 3201 (Veterinary Hospital Technology 2 Lab). A mock surgery lab will also be implemented and attended by students prior to beginning live animal surgery.

- A new and enhanced canine cardiopulmonary resuscitation (CPR) training model will be used in CPR labs for students to demonstrate competency of this essential skill in VTEC 3201.

- Videos showing equine limb techniques and small animal dental radiographic positioning will be added to Moodle to assist students in learning these topics in VTEC 3700 and 3701 (Veterinary Radiology).

- Additional guided lab time will be built in for equine limb and dental radiography to focus on repetition, muscle memory, and troubleshooting common errors in VTEC 3701. An equine limb positioning lab using our equine skeletal model will

also be added prior to live animal radiographs.

- Lab groups/partners will shift throughout the semester in VTEC 1031 to encourage communication between a variety of individuals and enhance the concept of teamwork to prepare students to work with a wide array of individuals in the workplace.

- Ethics topics will be discussed, and ethics skits/demonstrations will be conducted by students to enhance ethics knowledge, communication skills, and allow discussion on common ethics topics in veterinary medicine in VTEC 1011 (Intro to Veterinary Technology 1 Lab).

- A new, updated VTNE candidate handbook and new practice VTNE exams from PSI Services will be made available to students in VTEC 3200 (Veterinary Hospital Technology 2) & 4200 (Comprehensive Review) to better prepare students for the national board exam.

- Students will have hands-on individualized instruction with a student to instructor ratio of <8:1 for all live animal labs with documentation of each student's attainment of skills as mandated by the AVMA.

- All 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.