Assessment Cycle AY 2018 – 2019

Veterinary Technology Program Associate Degree

College: Arts and Sciences

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Northwestern Mission. Northwestern State University is a responsive, Student-oriented institution that is committed to the creation, dissemination, and acquisition of knowledge through teaching, research, and service. The University maintains as its highest priority excellence in teaching in graduate and undergraduate programs. Northwestern State University prepares its Students to become productive members of society and promotes economic development and improvements in the quality of life of the citizens in its region.

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. 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 Statement: 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 Veterinary Technology concentration and/or attending professional veterinary schools to become veterinarians. The program 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 (both 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 have met required 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 60 days.

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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 percent of students completing the course will be able to demonstrate a basic understanding by averaging 70% or higher scores on the examinations.

Findings: <u>Target met.</u>

AY 2017-2018: VTEC 1030 target met. 84% of students achieved 70% or higher
AY 2018-2019: VTEC 1030 target met. 80% of students achieved 70% or higher

Analysis: In AY 2017-2018, the target was met. The faculty/staff plan of action was more intensive examination preparation activities that were implemented for AY 2017-2018. Students enrolled in VTEC 1030 were given weekly quizzes in addition to major examinations. Outside reading assignments were incorporated into quiz preparation instructions to reinforce course materials knowledge. The instructor frequently worked to motivate students to succeed with presentations of case studies which demonstrated the role of the veterinary technician and the need for the technician to be knowledgeable for the patient to have the optimal chance for a positive outcome. The faculty/staff decided to strictly adhere to pre-requisite course requirements, so that students were better prepared to succeed as they entered the course. For AY 2017-2018, there was remarkable improvement over AY 2016-2017, with 84% (26/31) of students in VTEC 1030 meeting the goal of scoring 70% or higher on examination averages. The five students who were not successful in passing the class never became well invested in the learning process, were frequently absent from class, and made poor personal decisions despite the best efforts of the instructor(s). Even these students were successful in gaining essential hands-on applications of skills which were taught, monitored, and documented under direct one-on-one instructor supervision in VTEC 1031 laboratories, meeting the target for Measure 2.1 again in AY 2018-2019. In reflecting on the successes of AY 2017-2018 for these measures, the plan was to continue the actions which were successful in improving student learning and outcomes, and to consider further actions which may help the remaining students succeed. If students are struggling with class attendance and poor exam outcomes, the

instructor planned to meet with each who made less than 70% on the first examination to encourage improvement, and to refer the individual to counselling services or other appropriate avenues for assistance. Additionally, in 2018-2019, the course syllabi reflected strengthened attendance requirements by incorporating penalties for unexcused absences and requiring verifiable documentation for an absence to be excused. An additional requirement for course completion was added to VTEC 1030 in Spring 2019 with the goal of enhancing reading, verbal and written communication skills. At the close of the 2018-2019 academic year, the target was met with 80% of students successfully completing the course. Though planned improvements were implemented, five students enrolled did not meet the target. A careful assessment of each student's situation includes one with disinterest and change of major, two learning disabled students who had difficulty understanding and retaining the material, and two students who had to prioritize employment/working over academics and subsequently missed a lot of class.

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2017-2018	VTEC 1030	31	26	84%
2018-2019	VTEC 1030	25	20	80%

Decision: Based on the analysis of the 2018-2019 results, and to drive improvement, the changes implemented as previously described will be maintained for 2019-2020. To further improve class attendance, the weekly quiz requirement will move to a daily quiz requirement. Students who are tardy or absent will miss the quiz point opportunities for the day. The target for this measure will be adjusted to 80% of enrolled students averaging 70% or better for all graded course requirements, incorporating quiz grades, communications skills assignments, etc. Into the target evaluation. Further improvements will depend on individual student support when that student demonstrates difficulty in attending classes and learning material to achieve success. To the extent that each student can benefit from individualized attention, tutoring, and counselling, the instructor(s) will work to recognize the problems as they arise and provide available resources to the student.

Measure 1.2. (Direct – Skill / Ability)

One hundred percent 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 faculty veterinarian or credentialed veterinary technician will document completion of demonstration of each skill for each student successfully completing the laboratory course.

Findings: <u>Target met.</u>

AY 2017-2018: VTEC 1031 target met. 100% of students achieved 100%

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AY 2018-2019: VTEC 1031 target met. 100% of students achieved 100%

Analysis: In AY 2017-2018, the target was met, and this was repeated in AY 2018-2019. Because the veterinary technology curriculum requirements in VTEC laboratory courses are aligned to meet program accreditation standards for the American Veterinary Medical Association's Committee for Veterinary Technicians Education and Activities, students who successfully complete the laboratory courses *must* complete each required hands-on skill under the observation of a faculty supervisor, and each attained skill must be documented for each individual student. Students who miss laboratory sessions must make them up to receive a letter grade in the course; otherwise the student receives a grade of Incomplete or D or F, depending on the level of completion of other requirements. Students with Incomplete grades can complete the skills to earn a passing grade in the course. The expectation is that this target will be met each assessment year because of the structure adhered to by faculty delivering the laboratory courses. This structure is clearly defined for each student in the course syllabus of each VTEC laboratory course, and students are made aware of the importance of documentation of skills attainment in completion of the curriculum.

Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2017-2018	VTEC 1031	29	29	100%
2018-2019	VTEC 1031	24	24	100%

Decision: Based on the analysis of the 2018-2019 results, and to drive improvement, for 2019-2020, the plan is to continue hands-on individualized instruction, documentation of each student's attainment of skills, and the requirement that 100% of students 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 continue to 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 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)

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Measure: 2.1. **(Direct – Knowledge)**

Students enrolled in VTEC 2060, 2600, 3010, 3200-3201, and 3700-3701 will demonstrate proficiency in accrediting-agency (AVMA-CVTEA) required didactic skills/knowledge base following standard criteria for evaluating essential skills. Eighty percent of students completing the course(s) will be able to demonstrate a basic understanding by averaging 70% or higher scores on the examinations.

Findings: <u>Target met.</u>

AY 2017-2018: Target not met, but very close. 79% of students achieved exam scores of 70% or higher
AY 2018-2019: Target met. 84% of students achieved 70% or higher

Analysis: In AY 2017-2018, the target was not met. For most lecture courses evaluated in this sequence, outcomes improved over those of first-year students in AY 2017-2018 and AY 2018-2019. This is almost certainly due to the students who are not as interested and motivated to learn veterinary technician required knowledge changing to another major course of study by their sophomore or junior years. The veterinary technology program remains an open enrollment program, and students experiencing the first-year courses learn whether they are suited to the demands of a challenging program and career in veterinary medicine. Third-year courses evaluated in AY 2016-2017 met the target pass rates for examinations. The second-year courses (VTEC 2060 and VTEC 2600) did not. VTEC 2060 students are often second semester freshmen and their performance at 71% pass rate matched that of the freshman class. For AY 2018-2019, that has improved to 76%, still short of the targeted 80% pass rate, but improving. VTEC 2600 is the first course that students in the curriculum encounter that illustrates the full demands of veterinary medical education examinations, with short answer and essay questions the normal testing method, and the lower pass rate (54%) in AY 2017-2018 was well below the target of 80%. With the implementation of more intensive instruction and the use of case studies as described for VTEC 1030, AY-2017-2018 results for this course were much improved, though the pass rate (70%) for VTEC 2600 examinations fell just shy of the target goal (80%) at 79%. By AY 2018-19, this pass rate has improved to 76%, showing that faculty efforts for student engagement are working for improvement. Third year students' performance fell in AY 2017-2018 compared to AY 2016-2017 but was still close to meeting the target. This target was met for AY 2018-2019. Overall, the percent of students meeting the pass rate measure, though, improved from 73% in the first year assessed to 84% for AY 2018-2019.

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2017-2018	VTEC 2060	29	25	86%

2017-2018	VTEC 2600	33	26	79%
2017-2018	VTEC 3010	21	14	67%
2017-2018	VTEC 3200	12	10	83%
2017-2018	VTEC 3700	18	14	78%
2017-2018	TOTAL	113	89	79%

Assessment Year	Course	# Students Enrolled	# Students Scoring 70% avg. or higher on exams	Percent Students Meeting Measure
2018-2019	VTEC 2060	25	19	76%
2018-2019	VTEC 2600	19	15	79%
2018-2019	VTEC 3010	20	17	85%
2018-2019	VTEC 3200	16	14	88%
2018-2019	VTEC 3700	20	19	95%
2018-2019	TOTAL	100	84	84%

Decision: Based on the analysis of the 2018-2019 results, and to drive improvement in 2019-2020, the instructors plan to continue the one-on-one meetings and counselling strategies described for SLO 1 in 2018-2019, based on improvements noted to date. The target for 2019-2020 will be adjusted to include all course work averages at 70% average or above rather than just examinations, to reflect the importance of added critical thinking skills work on case studies, etc.

Measure: 2.2. (Direct – Skill / Ability)

One hundred percent of students enrolled in VTEC 3201 must each demonstrate mastery of 63 animal medical and surgical nursing and anesthetist skills through participation in live animal surgical procedures laboratories. One hundred percent of students enrolled in VTEC 3701 must demonstrate ability to complete 11 technical skills pertaining to diagnostic imaging. Each skill 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.

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Findings: <u>Target met.</u>

AY 2017-2018: Target met. 100% of enrolled students performed all skills
AY 2018-2019: Target met. 100% of enrolled students performed all skills

Analysis: In AY 2017-2018, the target was met and continued to be met in AY 2018-2019. Because of the stringent requirements for laboratory attendance and completion of skills to earn a passing grade, students who successfully complete these laboratory courses perform all required skills. VTEC 3201 includes the culmination of many skills attained in earlier laboratory courses, and additional skills required for anesthesia and live animal surgical assistance. It simulates on-the-job duties of the highest importance for graduates. A veterinarian and a veterinary technician from faculty work with a group of four students per live animal surgical or dental procedure for individualized instruction and supervision to ensure student success. Each skill is practiced multiple tiems and documented.

Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2017-2018	VTEC 3201	12	12	100%
2017-2018	VTEC 3701	16	16	100%
2017-2018	TOTAL	28	28	100%

Assessment Year	Course	# Students Enrolled	# Students Performing All Documented Skills	Percent Students Meeting Measure
2018-2019	VTEC 3201	16	16	100%
2018-2019	VTEC 3701	17	17	100%
2018-2019	TOTAL	33	33	100%

Decision: Based on the analysis of the 2018-2019 results, and to drive improvement, the plan for 2019-2020 is to continue hands-on individualized instruction, 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 continue to be required to ensure that each student attains the required skills, and important skills of anesthesia and surgery technician work will be repeated and practiced by each student. In VTEC 3701, a veterinarian or veterinary technician will work with groups of four students in patient imaging skills, and all common radiographic patient views will be taught and practiced by the students and documented.

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 that ratings of good-excellent will be earned for 95% or more of skills rated for each class of interns.

Findings: Target met.

AY 2017-2018: Target met. 100% of student skills performance rated good-excellent
AY 2018-2019: Target met. 100% of student skills performance rated good-excellent

Analysis: In AY 2017-2018, the target was met, and continued to be met in AY 2018-2019. The third learning outcome (SLO 3) measures the perception and rating of VTEC 2900 internship practicum students by supervising veterinarians/credentialed veterinary technicians in a veterinary hospital setting. No students in the 2018-2019 academic year have received a negative rating for skills performance. This demonstrates that students who complete the challenging course curriculum prior to the internship course are prepared to handle the demands of the workplace and have the essential skills that please employers.

Assessment Year	VTEC 2900	Excellent	Good	Poor
2017-2018	# ratings of skills performance	1,230	238	0
2017-2018	% ratings of skills performance	83.7%	16.3%	0.0%

Assessment Year	VTEC 2900	Excellent	Good	Poor
2018-2019	# ratings of skills performance	865	377	0
2018-2019	% ratings of skills performance	69.6%	30.4%%	0.0%

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Decision: Based on the analysis of the 2018-2019 results, and to drive improvement, in 2019-2020, the program instructors plan to continue to invest in hands-on instruction of skills that graduates' employers value, and to document each student's attainment of all required skills before the student enters the VTEC 2900 internship course.

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 less than 5% negative ratings (Below Average) for each class of interns.

Findings: <u>Target met.</u>

AY 2017-2018: Target met. No ratings of subjective characteristics below average
AY 2018-2019: Target met. No ratings of subjective characteristics below average

Analysis: In AY 2017-2018, the target was met, and continued to be met in AY 2018-2019. Program students during AY 2016-2017 earned very few (2.8% or less) negative ratings from supervisors in subjective characteristics such as work-place character/integrity/ethics, reliability, etc. This measure was even more positive for AY 2017-2018 and 2018-2019, with a remarkable 0.0% of negative ratings subjective characteristics for internship practicum students. This demonstrates that students who make it through the challenging program curriculum to the internship course have the work ethic and dependability characteristics to be valued employees in the work place as veterinary technicians.

Assessment Year	VTEC 2900	Above Average	Average	Below Average
2017-2018	# ratings of subjective characteristics	71	9	0
2017-2018	% ratings of subjective characteristics	88.7%	11.2%	0.0%

Assessment Year	VTEC 2900	Above Average	Average	Below Average
2018-2019	# ratings of subjective characteristics	59	12	0
2018-2019	% ratings of subjective characteristics	83%	17%	0.0%

Decision: Based on the analysis of the 2018-2019 results, and to drive improvement, the plan in 2019-2020 is to continue the delivery of the veterinary technology curriculum with requirements for student ownership and assessment for individual outcomes, and to include assessment of students in part based on reliability in the care of animals, etc., which correlates well with their work place performance. VTEC 1011 and VTEC 1031 courses each require one week of animal care duties, and students who seriously neglect those duties will not receive a passing grade in the course. This requirement correlates well to this target which measures subjective work ethic and character of our VTEC 2900 internship students.

SLO 4. Students will demonstrate proficiency in Veterinary Technology by passing scores of first-time test takers on the Veterinary Technician Examination 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. School reports are provided by the test administrators for each examination cycle and for the most recent three years ending on June 30.

Findings: <u>Target not met.</u>

AY 2017-2018: Target not met but is improving. NSU graduates 60% pass rate; national average 70.31%
AY 2018-2019: Target not met, but continuing improvement. NSU graduates 61.8% pass rate over last 3 years; national average pass rate is 71%

Analysis: In AY 2017-2018, and again in AY 2018-2019, the target was not met. The expected outcome is that graduates will equal the national pass rate percentage on their first attempt to pass the VTNE. This has not happened over the past three years when analyzed in AY 2016-2017, AY 2017-2018, and AY 2018-2019. There was improvement in the 2017-2018 assessment year, however, with the pass rate moving from 56.67% to 60%, and for AY 2018-2019, the three-year pass rate has improved to 61.8%, less than 10% away from the national average of 71%. When evaluating most recent year's testing window data available, the NSU graduate averages for total percent of items correct is higher than the national average. 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 example, in the testing window most recently available for analysis, the range of raw scores for NSU graduates was 337-668, with 425 being the lowest passing score. Last year, the instructors in the VTNE comprehensive review course added review of the examination domain structure and weighting, as well as requiring that each enrolled student take an online practice exam as a culmination of the course activity, with the goal of encouraging individuals to spend more time in preparation before the examination.

VTNE July 2014—June 2017	Pass	Fail
NSU graduates' performance (#)	21	14
NSU graduates' performance (%)	60%	40%
National average (%)	70.31%	29.69%

VTNE July 2015—June 2018	Pass	Fail
NSU graduates' performance (#)	14	10
NSU graduates' performance (%)	58.33%	41.67%
National average (%)	69.94%	30.06%

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

Decision: Based on the analysis of the 2018-2019 results, and to drive improvement, in 2019-2020, the instructors have considered incorporation of a commercial VTNE test preparation course into the existing review course. The course has been purchased for faculty review, and student interest is favorable. In 2019-2020, it will be required for the students enrolled in VTEC 4200 (the comprehensive review course), and performance on the practice examinations at the end of the course will be included as a component of each student's course grade.

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: <u>Target not met.</u>

AY 2017-2018: Target not met. Raw total scores for NSU graduates exceeded national

average, but improvements needed in Dentistry, Diagnostic Imaging, Anesthesia, and Pain Management/Analgesia

AY 2018-2019: Target not met but improving. All four target areas from this year's focus for improvements had increases in the most recent testing Window, with each domain score (Dentistry, Diagnostic Imaging, Anesthesia, and Pain Management/Analgesia) now above the national average for first time test takers.

Analysis: When the domain scores were evaluated in AY 2016-2017, on average our graduates scored above passing in six of nine categories, and above the national average in Dentistry, Diagnostic Imaging, Surgical Nursing, and Emergency Med/Critical Care. The total domain score average was within about ten points of the national average, well above passing. For AY 2017-2018, the report formatting changed to show raw scores for percent examination items correct, so it was difficult to compare directly with the previous assessment year. However, it was clear that improvements in domain scores occurred in Diagnostic Imaging and Surgical Nursing. For AY-2018-2019, improvements were seen in focus areas (Dentistry, Diagnostic Imaging, Anesthesia, and Pain Management/Analgesia).

VTNE Domain (Official report format changed) July 15-August 19, 2017	NSU Grad. Avg. Percent Correct*	National Avg. Percent Correct*
Pharmacy & Pharmacology	66.67%	66.22%
Surgical Nursing	73.53%	66.36%
Dentistry	60.00%	68.70%
Laboratory Procedures	69.44%	65.44%
Animal Care & Nursing	72.73%	71.22%
Diagnostic Imaging	50.00%	57.16%
Anesthesia	66.67%	68.96%
Emergency Med/Critical Care	83.33%	69.11%
Pain Management/Analgesia	50.00%	56.98%
RAW TOTAL	67.33%	66.74%

VTNE Domain March 15 – April 20, 2018	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	64.81%	62.07%
Surgical Nursing	60.78%	57.39%
Dentistry	65.00%	62.53%
Laboratory Procedures	68.52%	65.04%
Animal Care & Nursing	70.71%	69.06%
Diagnostic Imaging	63.64%	56.83%
Anesthesia	59.72%	60.39%
Emergency Med/Critical Care	59.26%	57.23%

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Pain Management/Analgesia	55.00%	61.55%
RAW TOTAL	61.21%	62.49%

VTNE Domain July 15-August 15, 2018	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	83.33%	78.96%
Surgical Nursing	73.53%	67.61%
Dentistry	58.33%	69.05%
Laboratory Procedures	76.47%	71.14%
Animal Care & Nursing	68.33%	68.85%
Diagnostic Imaging	86.36%	67.51%
Anesthesia	77.27%	72.61%
Emergency Med/Critical Care	66.67%	71.00%
Pain Management/Analgesia	72.73%	66.62%
RAW TOTAL	73.67%	70.66%

VTNE Domain Nov 15-December 15, 2018	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	70.00%	72.77%
Surgical Nursing	69.41%	64.26%
Dentistry	60.00%	64.58%
Laboratory Procedures	65.88%	64.38%
Animal Care & Nursing	63.33%	64.13%
Diagnostic Imaging	74.55%	62.15%
Anesthesia	70.91%	68.80%
Emergency Med/Critical Care	55.00%	60.71%
Pain Management/Analgesia	67.27%	60.44%
RAW TOTAL	66.40%	65.24%

VTNE Domain March 15-April 19, 2019	NSU Grad. Avg. Percent Correct	National Avg. Percent Correct
Pharmacy & Pharmacology	68.52%	72.49%
Surgical Nursing	60.78%	65.39%
Dentistry	72.22%	71.29%
Laboratory Procedures	49.02%	61.65%
Animal Care & Nursing	61.11%	66.23%
Diagnostic Imaging	81.82%	61.11%
Anesthesia	68.18%	64.30%
Emergency Med/Critical Care	55.56%	67.36%
Pain Management/Analgesia	57.58%	53.44%
RAW TOTAL	63.33%	65.27%

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Decision: Based on the analysis of the 2018-2019 results, and to drive improvement, the focus for the next academic year (2019-2020) will be improving scores in the Laboratory Procedures Domain which fell below the national average for the first time in recent years in the last test taking window for which scores are available. The courses (VTEC 3100-3101 and VTEC 3190-3191) will be evaluated for changes in lesson plans to bring more emphasis to targeted areas of knowledge that may help students with scores in this domain, and students' performance in that domain for the year following the incorporated changes will be closely evaluated for improvements.

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

1) The program is succeeding in teaching hands-on skills to students required of a competent veterinary technician and is meeting overall pass rate targets on didactic examinations in the first-year and beginning second-year students, meeting target goals in SLOs 1,2, and 3 in AY 2018-2019 that were not met in AY 2017-2018. By the late second and third years of education, veterinary technology students are reaching target goals for examination pass (70%) rates, moving from 73% of enrolled students in AY 2017-2018 meeting targets to 84% of those enrolled in AY 2018-2019 meeting targets (SLO 2).

2) The program is meeting its mission of producing clinically competent veterinary technicians, as evidenced by meeting target goals of internship practicum student evaluations by supervising veterinarians and veterinary technicians in the field. In fact, no skills assessment for any internship practicum student was rated as poor and no subjective characteristics such as motivation, work ethic, reliability, etc. were rated as below average by any direct internship supervisor in AY 2017-2018 or AY 2018-2019. (SLO 3).

3) The program is not yet meeting the target of Veterinary Technicians National Examination (VTNE) pass rates meeting the national average when evaluated over the past three years, but improvements are evident (SLO 4). Three-year average pass rates have climbed from 51.5% (AY 2015-2016) to 56.7% (AY 2016-2017) to 60% in AY 2017-2018, and 61.8% in AY 2018-2019. Results from are encouraging. The faculty/staff continues to invest efforts in improving domain scores in clinical areas indicated by the latest evaluation as areas where students score below the pass rate on average.

Plan of Action Moving Forward

The program faculty/staff will continue diligently working to produce graduates who are competent, professional, and compassionate towards their patients and clients, as noted by the decisions made for AY 2019-2020 after evaluating results from 2018-2019. Efforts will continue to develop each student's knowledge base, and to remove, whenever possible, obstacles to learning. Specific efforts will be made to motivate students to review and prepare for the VTNE examination, and to inform them of the

domains and expose them to the format of testing. Methods that have resulted in improvements in reaching targeted goals will continue.

Program graduates have been provided with the opportunities required to be great veterinary technicians, and employer demand for NSU graduates within the State is readily visible evidence to support this statement. Getting each student to take advantage of those opportunities for learning continues to be encouraged by program faculty/staff.