

## **Assessment of Student Learning in the Veterinary Technology Division 2016-2017**

### **Veterinary Technician Option**

#### Program Outcomes:

1. Upon completion of the Veterinary Technician Option, students will be able to demonstrate proficiency in the essential skill and tasks outlined by the American Veterinary Medical Association. The list represents the complex role of the veterinary technician and encourages instruction in motor skills, critical thinking, entrepreneurship, and clinical application at the veterinary technician entry level in the following areas:
  - Office and Hospital Procedures
  - Pharmacy and Pharmacology
  - Nursing Skills
  - Anesthesia
  - Radiology
  - Surgical Prep and Nursing
  - Parasitology, Hematology and Clinical Pathology
  - Animal Husbandry, Handling, Behavior and Restraint
  - Anatomy and Physiology
  
2. Upon completion of the Veterinary Technician Option, students will be able to demonstrate the academic background needed to pass the Veterinary Technician National Exam. (VTNE)

#### Assessment Tools:

1. AVMA Essential Skill Book for applied skills
2. Learning outcomes and assessments are done within all classes.
3. Exit Exam
4. 3.0 CGPA
5. Internship evaluations
6. Pass rate on Veterinary Technician National Exam

#### AVMA Essential Skill Check off Book

- The AVMA Essential Skill Check off Book is updated each semester as classes are completed and LOA are analyzed. The book is then reprinted and provided to all incoming students fall semester. The tracking of individual student completion of all AVMA skills and tasks is a high priority item for maintaining AVMA accreditation of the Veterinary Technician Option.
- In the past hands-on skills were tracked within each individual class but not all in one place for each individual student.
- This procedure has been in place with adequate results since fall of 2014. The 2016 graduating class was the first to use the book in its entirety. Our goal is that the technician and assistant option students successfully complete at least 70% of the essential skills.

Cohort	Random Sample Size	Result	Comments
2014-2016	5	70%	3 out of 5 had 70% or more of the tasks and skills signed off
2015-2017	5	80%	4 out of 5 had 70% or more of the tasks and skills signed off
2016-2018			

## Learning Outcomes

Course Number	Course Name	SLO 1	SLO 1a Office	SLO 1b Pharm	SLO 1c Nursing	SLO 1d Anes	SLO 1e Radio	SLO 1f Surg	SLO 1g Clin Path	SLO 1h Hubst	SLO 1i Anat
VTS 1404	Anatomy & Physiology	A		X			X			X	A
VTS 2933	Anesthesiology	A	X	A	A	A	A	A	A	A	
VTS 1513	Animal Care	A	X		A	X		A	A	A	X
VTE 2423	Canine & Feline Nutrition	A	X	X				A		A	
VTS 2241	Career Strategies	A	X								
VTS 2672	Clinical Pathology	A	X	X	X	X		A	A		X
VTS 2331	Clinical Practices	A	A	A	A	X	X	X	A	A	X
VTS 2733	Diseases of Veterinary Medicine	A	X	X					A		A
VTS 1542	Facility Management I	A	A		X						
VTS 2662	Hematology	A	X		X	X		A	A	X	X
VTE 2422	Hills Small Animal Nutrition	A						A		X	
VTS 1603	Intro to Laboratory Science	A	X		X			A	A	X	
VTS 2532	Large Animal Techniques	A			X	X		X		A	X
VTS 2521	Lg Animal Clinical Rotation	A	X	X	X	X		X		A	X
VTS 1313	Math for Vet Techs	A		X	X	X		A	X	X	
VTS 1301	Medical Terminology	A	X	X	X	X	X	X	X	X	X
VTS 2583	Nursing I	A	X	X	A	X	X	A	X	A	X
VTS 2593	Nursing II	A	X	X	A	X	X	A	X	A	X
VTS 2652	Parasitology	A	X	X	X	X		A	A	X	X
VTS 1713	Pharmacology & Anesthesia	A	X	A		A		A			X
VTS 1521	Production Animals	A		X						A	X
VTS 1822	Radiology I & II	A	X				A	A		A	X
VTS 2953	Surgery Prep	A	X	A	A	A	A	A	X	A	A

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

## Exit Exam

The Exit Exam is one required criteria for the Veterinary Technician Option. To be eligible to take this exam the Vet Tech student must be able to have successfully completed (with the exception of internship) all required credit hours by the end of the semester. The exit exam is administered once a year. The entire comprehensive examination must be passed with an average grade of 70% or better and each section must be passed with a minimum grade of 60%. A maximum of two sections may be repeated during the provided repeat time. Each student must complete all required classes, have a CGPA of 80% and pass the exit exam to graduate with the Veterinary Technician Option. Each written section is 50-100 questions in length. Tests are taken during designated times.

### Exit Exam Pass Rate

**Nebraska College of Technical Agriculture  
Veterinary Technician National Exam Pass Rate by Graduating Class**

Year of graduation	Number taking test for the year	Number passing test first time	Number passing on 2 <sup>nd</sup> attempt	Overall pass rate for the cohort
2017	9	8		88%
2016	9	6	1	77%
2015	8	5	2	87.5%
2014	16	11		69%
2013	11	11		100%
2012	7	6		86%
2011	9	6		66%

Our goal for the three year pass rate is 80%. An identified problem was the length of time between when the graduates have completed the academic classes and when they are able to sit for the exam which is now 6 months. Beginning in 2014 candidates could no longer take the test while on internship. This is being addressed for the 2017 graduating class. By shortening internship they will graduate in May instead of August which qualifies them to take the VTNE during the July-Aug test window instead of the current Nov-Dec test window. Thus far the pass rate for the 2017 graduates is above the goal of 80%

## **Veterinary Assistant Option**

### Veterinary Assistant Program Outcomes

1. Upon successful completion of the Veterinary Assistant Option, students will be able to demonstrate proficiency in motor skills, critical thinking, entrepreneurship, and clinical application skills at the veterinary assistant entry level.
2. Upon successful completion of the Veterinary Assistant Option, students will be able to demonstrate entry level proficiency in the skills and tasks in the following areas:
  - Office and Hospital Procedures
  - Pharmacy and Pharmacology
  - Nursing Skills
  - Anesthesia
  - Radiology
  - Surgical Prep and Nursing
  - Parasitology, Hematology and Clinical Pathology
  - Animal Husbandry, Handling, Behavior and Restraint
  - Anatomy and Physiology

### Veterinary Assistant Assessment Tools:

1. AVMA Essential Skill Book for applied skills
2. Learning outcomes and assessment done within each class containing essential skills
3. 2.00 CGPA
4. Internship evaluations

## Veterinary Assistant - Learning Outcomes

Course Number	Course Name	SLO 1	SLO 1a Office	SLO 1b Pharm	SLO 1c Nursing	SLO 1d Anes	SLO 1e Radio	SLO 1f Surg	SLO 1g Clin Path	SLO 1h Husb	SLO 1i Anat
VTS 1404	Anatomy & Physiology	A		X			X			X	A
VTS 2933	Anesthesiology	A	X	A	A	A	A	A	A	A	
VTS 1513	Animal Care	A	X		A	X		A	A	A	X
VTE 2423	Canine & Feline Nutrition	A	X	X				A		A	
VTS 2241	Career Strategies	A	X								
VTS 2672	Clinical Pathology	A	X	X	X	X		A	A		X
VTS 2331	Clinical Practices	A	A	A	A	X	X	X	A	A	X
VTS 2733	Diseases of Veterinary Medicine	A	X	X					A		A
VTS 1542	Facility Management I	A	A		X						
VTS 2662	Hematology	A	X		X	X		A	A	X	X
VTE 2422	Hills Small Animal Nutrition	A						A		X	
VTS 1603	Intro to Laboratory Science	A	X		X			A	A	X	
VTS 2532	Large Animal Techniques	A			X	X		X		A	X
VTS 2521	Lg Animal Clinical Rotation	A	X	X	X	X		X		A	X
VTS 1313	Math for Vet Techs	A		X	X	X		A	X	X	
VTS 1301	Medical Terminology	A	X	X	X	X	X	X	X	X	X
VTS 2583	Nursing I	A	X	X	A	X	X	A	X	A	X
VTS 2593	Nursing II	A	X	X	A	X	X	A	X	A	X
VTS 2652	Parasitology	A	X	X	X	X		A	A	X	X
VTS 1713	Pharmacology & Anesthesia	A	X	A		A		A			X
VTS 1521	Production Animals	A		X						A	X
VTS 1822	Radiology I & II	A	X				A	A		A	X
VTS 2953	Surgery Prep	A	X	A	A	A	A	A	X	A	A

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

## Animal Husbandry, Equine Health Care, Animal Health Management

### Program Outcomes:

1. Students will be able to effectively communicate in oral and written form.
2. Students will be able to gather, assimilate, and process information to reach sound logical conclusions in their chosen career pathway.
3. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)

### Assessment Tools:

Learning outcomes and assessment done within each class required class

1. 2.00 CGPA
2. Internship evaluations

### Animal Husbandry Option – Learning Outcomes

Course Number	Course Name	SLO1	SLO2	SLO3
VTS 1542	Facility Mgt I	A	A	A
ASI 1442	Equine Practicum	x	A	A
PSY 1011	Learning Communities	x	A	x
VTS 1313	Math for Vet Techs	x	A	A
VTE 2821	Radiation Safety	A	A	A
VTS 1822	Radiology I	A	A	A
VTE 2552	Facility Mgt II	A	A	A
College Core Classes		A	A	x
Veterinary Technology courses		A	A	A

### Animal Health Management – Learning Outcomes

Course Number	Course Name	SLO1	SLO2	SLO3
ACT 1103	Accounting I	x	A	A
PSY 1011	Learning Communities	x	A	x
VTS 1301	Medical Terminology	x	A	A
VTS 1603	Intro to Lab Science	x	A	A
ASI 1501	Equine Safety	x	A	A
VTS 1313	Math for Vet Techs	A	A	A
ABM 2203	Office Practices	A	A	A
ACT 1203	Accounting II	x	A	A
VTE 2821	Radiation Safety	A	A	A
VTS 1822	Radiology I	A	A	A
MGT 2103	Management Concepts	A	A	A
MGT 2503	Human Resource Mgt	A	A	A
VTE 2322	Intro to Vet Office	x	A	A
ASI 1253, VTE 2423	Nutrition	x	A	A
VTS 2241	Career Strategies	A	A	A
College Core Classes		A	A	x
Veterinary Technology courses		A	A	A

Equine Health Care - Learning Outcomes

Course Number	Course Name	SLO1	SLO2	SLO3
ASI 1011	Intro to Animal Science	A	A	A
PSY 1011	Learning Communities	x	A	A
VTS 1301	Medical Terminology	A	X	A
VTS 1603	Intro to Lab Science	x	A	A
ASI 1501	Equine Safety	x	A	A
VTS 1313	Math for Vet Techs	A	A	A
VTS 1404	Anatomy & Physiology	x	A	A
ASI 1442	Equine Practicum	x	A	A
VTS 1822	Radiology I	A	A	A
VTS 152	Production Animals	x	A	A
VTS 1713	Pharmacology	x	A	A
ASI 1432	Equine Care	x	A	A
VTE 2623	Feeding Equine Patients	x	A	A
VTS 2241	Career Strategies	A	A	A
VTE 1631	Practical Skills	x	A	A
VTS 2532	Lg Animal Techniques	x	A	A
VTE 1633	Equine Diseases	x	A	A
VTE 1623	Equine Lab Diagnostics	A	A	A
ACT 1103	Accounting	A	A	A
ASI 2433	Equine Industry Mgt	x	x	x
College Core Classes		A	A	A
Veterinary Technology courses		A	A	A

“X” for courses or experiences in which students have the opportunity to learn the outcome.

“A” for courses or experiences in which student performance is used for program level assessment of the outcome.

Equine Health Care Final Assessment			
Cohort	Number taking test	Score range	Mean
2015-2017	4	66%-82%	81%

### **Classroom Learning Outcomes**

- LOA are done for all classes. Tracking, details of the results and changes done to improve classes can all be found on the common/Veterinary Technology/Assessment. These are discussed in a general manner during division meetings, one-on-one and during the annual division meeting where all curriculum, essential skills and learning outcomes are reviewed and updated as needed.
- Class learning outcomes are based on the course description and the AVMA essential skills taught in the class. The outline reflects the learning outcomes

### **Internship Assessment**

Students complete an internship as part of every Veterinary Technology Option. Most complete the internship during after completing all academic classes. The student must prepare goals and objectives for internship, track progress with essential skills and complete weekly progress notes.

Based on interviews done during internship visits and over the phone as well as student and employer evaluations several themes emerge.

- Students who do internship between semesters often return with some of the lower employer evaluations but mature during the internship and return as stronger and more motivated students.
- Students who are on an extended time track for graduation and / or are graduating with an option other than Veterinary Technician often have the poorer feedback from the employers.
- The ability of the student to perform entry level skills is taken for granted and rarely do the students disappoint.
- When there is a problem it is nearly ALWAYS work ethic. More specifically absenteeism and lack of communication. This is less of an issue with students completing a degree in two years and more of an issue with those needing an extended period of time to complete their degree.
- Overall ratings continue to be strong for interns.



### Internship Employer Survey Results

Scale of 0 to 4 with 4 being the highest

Category – Work Ethic-Professionalism	2017 Tech	2016 Tech	2017 Assistant	2016 Assistant	2017 Husbandry	2016 Husbandry
Attendance	3.8	3.9	4.0	3.9	2	3.3
Displays a positive attitude	3.7	3.8	3.3	3.4	2	3.5
Listens attentively and follows directions.	3.5	3.4	3.0	3.5	3	3.3
Uses time effectively-keeps busy-sees things that need done	3.2	3.0	3.3	2.8	1	2.5
Honest	3.7	3.7	3.7	3.6	3	3.3
Completes work carefully, pays attention to details	3.6	3.3	3.0	3.0	2	2.8
Works independently-self-motivated	3.1	3.0	3.0	2.9	1	2.3
Uses problem solving skills	3.3	3.2	3.0	2.9	2	2.8
Speaks clearly to clients and co-workers	3.2	3.2	2.7	3.3	1	2.5
Shares in group discussions & initiates questions	3.2	3.5	2.7	3.1	2	3.0
Communication of ideas, team player, seeks input		3.5			2	2.8
Courtesy, kindness, respectful, appropriate sense of humor	3.7	3.8	3.7	3.5	3	3.3
Adjusts to new situations	3.4	3.4	3.0	3.0	2	3.0
Professional appearance	3.8	3.6	3.7	3.6	3	3.3
<b>Overall average in the work ethic area</b>	<b>3.7</b>	<b>3.7</b>	<b>3.5</b>	<b>3.3</b>	<b>2.2</b>	<b>2.5</b>
Overall all ability with Technical skills	3.1	3.3	3.3	3.5	2	2.5
Adaptability to clinic's way	3.1	3.0	3.7			
Pharmacology	3.1	3.1	3.0	2.9		
History taking and physical examinations	3.1	3.1	3.0	2.6		
Lab skills: parasitology, hematology, clinical pathology	2.9	3.1	3.0	3.3		
Radiology & Ultrasound	3.3	2.8	2.7	1.9		
Animal handling and restraint	3.6	3.3	3.0	3.1	2	4
Practice Management	3.2	2.5	2.7	2.1		
Anatomy	2.9	3.1	3.3	2.6		
Anesthesiology	3.1	3.2	3.3	2.5		
Surgery Prep	3.2	3.3	3.3	3.0		
Nursing skills	3.0	3.3	2.7	3.0		
<b>Overall average in technical skills</b>	<b>3.3</b>	<b>3.4</b>	<b>3.2</b>	<b>3.0</b>	<b>2</b>	<b>3.2</b>
Number of students evaluated	20	16	3	8	1	4

## **Veterinary Technology - Program Level Assessment**

Program level assessment is based primarily on class learning outcomes. In addition student evaluations, internship evaluations and instructor inputs are considered. Specific plans for improvement are also derived from the Technician Educators Conference attended by 1 or 2 faculty members each year that it is offered with the most recent being attended summer of 2017.

### **Overall Program Outcome Summary**

Specific plans to improve learning in 2017-2018 include

- Move Sales from a 8 week summer class to a 16 week fall class
- Move Fur and Feather from fall semester back to summer session where it has been highly successful. As a fall class a very large number of animals were needed for the number of students in class. Summer is much more manageable.
- Limit the number of credit hours a student can take during the summer session to 12
- Restructure Learning Communities class to include additional study skills and lessons as well as addressing additional areas of overall deficiency that seem to affect many students.
- Restructure the Teaching Clinic class to focus on more case based learning opportunities.
- Incorporate a wider variety of learning opportunities within the lecture portion of several classes.
- Implement higher expectations of the students in areas of attendance, knowledge level, reliability, problem solving, professional attire and honesty.

For the most part, students are meeting the program outcomes in the degree option they are pursuing and acquire essential knowledge and skills for them to be productive in the animal health industry. Some students learn better through hands-on activities and struggle with the more academic paper pencil part of learning. Math, reading skills, lack of scientific background and attendance are handicaps for some.