Veterinary Medicine (DVM)

DVM Veterinary Medicine

Mission:

The UF College of Veterinary Medicine (CVM) is the state's only veterinary college, graduating its first class of veterinarians with the Doctor of Veterinary Medicine (DVM) degree in 1980. The University of Florida's College of Veterinary Medicine DVM degree program has been accredited by the American Veterinary Medical Association Council on Education throughout its existence. The CVM faculty has developed a strong curriculum of professional study that is designed to meet the mission of preparing the next generation of veterinarians for broad veterinary career paths.   This program aligns with the College of Veterinary Medicine mission statement, which is "The College of Veterinary Medicine advances animal, human, and environmental health through education, research, and patient care." It also aligns with the University's mission "to lead and serve the state of Florida, the nation and the world by pursuing and disseminating new knowledge while building upon the experiences of the past."

Program Type and Level: Professional Doctorate

Start: 07/01/2021

End: 06/30/2022

Program: Veterinary Medicine (DVM)

Program CIP: 51.2401

Site Information: On Campus (Residential)

If Other Site: :

Responsible Roles: Amanda House (housea@ufl.edu), Dana Zimmel (zimmeld@ufl.edu), Sarah Bell (scorbitt@ufl.edu)

PG 1 Classroom, Clinical, and Research Experiences

Goal:

Students will obtain classroom and clinical experiences and research exposure necessary to qualify them for a variety of career paths within veterinary medicine.

Program: Veterinary Medicine (DVM)

Evaluation Method:

1. Degree candidates are asked to document their immediate post-graduation employment decision
2. Employer survey distributed at 12 months post-graduation
3. Alumni survey distributed at 18 months post-graduation

Results:

1. **Post-graduation career plans for the students who graduated in 2022:** Of the 117 respondents, 113 indicated that they accepted a position in veterinary medicine, 4 have indicated they have not yet accepted a position. The breakdown for employment offers and decisions was: 2 students accepted offers for food animal/food safety predominant practice, 3 accepted offers for mixed animal practice, 8 accepted offers for equine practice, 93 accepted offers for companion animal predominant practice, 3 accepted offers from exotic/other positions, 2 accepted an offer in a dual residency and PhD program and 1 decided to practice while pursuing a Master's of Science.
2. **Employer survey data:** 19 employers responded to the annual employer survey for the class of 2021. Employers rate the UF DVM graduates as either meeting or exceeding their expectations (at or above 90%) in 12 of the 14 areas on the survey. Those areas are foundational knowledge, anesthesia and pain management, clinical decision-making, basic medicine skills, basic surgery skills, emergency and intensive care case management, one health knowledge, communication, diversity, respect, and multicultural awareness, management of self and team, animal welfare and ethical conduct, and lifelong learning skills. In 2 areas, employers rate the UF DVM graduate as either meeting or exceeding their expectations at a rate lower than 90%, both of which were extremely close to the goal. Those areas are collaboration (89.47) and financial and business skills (84.21%).
3. **Alumni survey data:** (The Class of 2020 was accidentally surveyed at 6 months, so the survey was redistributed again at 18 months, the second distribution of the survey did not yield any further responses.) As previously reported, when the 2020 graduates were survey after 6 months, 20 alumni responded to the alumni survey. Alumni rate the DVM program as meeting or exceeding their expectations (at or above 90%) in 4 of the 9 areas. Those areas are comprehensive patient diagnosis and appropriate use of clinical laboratory testing, basic medicine skills, lifelong learning skills and communication skills. In 5 areas, alumni rate the DVM program as either meeting or exceeding their expectations at a rate lower than 90%. Those areas are anesthesia and pain management (84%), basic surgery skills (85%), emergency and intensive care case management (88%),

one health knowledge (80%), and financial and business skills (85%). Although these categories were reported at lower intervals than the others in the survey, they remain high - and are attributed to the program's quality.

PG 2 Advanced Clinical Specialty or Post-Graduate Research Training

Goal:
Graduates will obtain a level of training that ensures they will be competitive applicants for advanced training and/or professional practice.
Program: Veterinary Medicine (DVM)
Evaluation Method:
Graduates from the DVM program will obtain an offer for advanced training to an academic internship as evidenced by the outcome of the Veterinary Medicine Intern/Resident Match Program (VIRMP). The 'match' criterion is that our students' matches will be above the national average.

Students will pass the NAVLE, the national licensure examination, and will achieve a pass of 95% for first time test takers.

Results:
71.43 percent of UF CVM graduates who applied for internships were matched. This was more than the national average at 65.55 percent of applicants matched.

According to the 2021 Interim School Report from the International Council for Veterinary Assessment, 110 of 113 (or 97 percent) first-time test takers passed the NAVLE assessment.

SLO 1 Apply Foundational Knowledge

Outcome:
Students identify, explain, describe and apply foundational knowledge pertinent to established and emerging areas of veterinary practice.
SLO Area (select one): Knowledge (Grad)
Assessment Methods Checklist: Faculty developed examination(s)/test(s)
Assessment Method Narrative:

Students are assessed in the didactic curriculum (first 2 years of the DVM Program) using faculty-created criterion referenced assessments in ExamSoft. Each test item is tagged to one of the competencies outlined in the CVM Educational Framework (adapted from the Competency-Based Veterinary Education approach from the AAVMC by college faculty).

Only competencies with at least 5 tagged test items will be considered. Students will have met the outcome if they mastered at least 60 percent of the content in that category.

SLO Not Assessed This Year:
Threshold of Acceptability: 85
How many students did you assess for this outcome?: 249
How many students met the outcome?: 222
What percentage of students met the outcome?: 89
Does this meet your threshold of acceptability?: Yes
Results:
First-Year Students: Class of 2025

For the first-year students (Class of 2025), 1291 test items were tagged to one of the following competencies:

- Foundational Scientific Knowledge
- Clinical Decision-Making Skills: Comprehensive patient diagnosis (problem solving skills), appropriate use of diagnostic testing, and record management
- Clinical Decision-Making Skills: Comprehensive treatment planning including patient referral when indicated
- Basic Surgery Skills

113 of 129 students demonstrated mastery of at least 60 percent of the test items tagged to these competencies with 100 percent of students demonstrating strong progress in the Foundational Scientific Knowledge competency.

Test items tagged to "Clinical Decision-Making Skills: Comprehensive treatment planning including patient referral when indicated" proved to be most challenging for these students. It is important to note, mastery of this content is not expected in the first year, as the first year of curriculum is dedicated to normal animal physiology and behavior. Mastery of all competencies is not expected until graduation.

Second-Year Students: Class of 2024

For the second-year students (Class of 2024), 2404 test items were tagged to one of the following competencies:

- Foundational Scientific Knowledge
- Clinical Decision-Making Skills: Comprehensive patient diagnosis (problem solving skills), appropriate use of diagnostic testing, and record management
- Clinical Decision-Making Skills: Comprehensive treatment planning including patient referral when indicated
- Anesthesia and Pain Management
- Basic Surgery Skills
- Basic Medicine Skills
- Emergency and Intensive Care Case Management
- One Health (Animal, Human, and Environmental)
- Animal Welfare and Ethical Conduct

109 of 120 students demonstrated mastery of at least 60 percent of the test items tagged to these competencies with greater than 98 percent of students demonstrating strong progress in the Foundational Scientific Knowledge, Clinical Decision-Making Skills *diagnosis, Basic Surgery Skills, Emergency and Intensive Care Case Management, and One Health competencies.

Test items tagged to "Anesthesia and Pain Management" proved most challenging for students in this class.

Note

This was our first cycle using the ExamSoft tagging for this SLO. Historically, course grades were used to demonstrate mastery of the didactic curriculum. It was determined that this was insufficient in capturing student achievement toward the program outcomes. By using ExamSoft tagging, we are better able to describe how student knowledge is building toward the clinical competencies. The threshold of acceptability was also altered for this SLO as the assessment method has changed.

SLO 2 Technical Skills

Outcome: Apply the technical skills required for veterinary practice.
SLO Area (select one): Skills (Grad)
Assessment Methods Checklist: Other - please describe in the Assessment Method Narrative.
Assessment Method Narrative:
Students are assessed using "Student Learning Opportunities" - procedures that are demonstrated by the students. A list of Graduation-Required Student Learning Opportunities were compiled by college faculty. Students must demonstrate appropriate mastery of the task, submit the task for review to the observing faculty, and faculty must approve or reject the student's request. Each student is required to complete 80 percent of the graduation-required list prior to graduation as part of the degree requirement.

SLO Not Assessed This Year:
Threshold of Acceptability: 98
How many students did you assess for this outcome?: 118
How many students met the outcome?: 118
What percentage of students met the outcome?: 100
Does this meet your threshold of acceptability?: Yes
Results:
Of the 118 students who graduated in the Class of 2022 - all students met this outcome.

For this group of students, it was determined that COVID had a negative impact on their ability to submit these "Student Learning Opportunities" for faculty review - with the shutdown closing our clinics and hospitals to students for roughly 8 weeks of the available 52-weeks of clinical rotations. Because of this impact, the requirement for student submissions was reduced to 65 percent of the list

instead of the standard 80 percent.

Note

Previously, student grades in the clinical clerkships were used to demonstrate progress or mastery of this SLO. This was deemed insufficient in demonstrating student mastery of technical skills. The Graduation Required Student Learning Opportunities- or procedural observations and submissions - provide more appropriate evidence of the attainment of technical veterinary skills of our students.

SLO 3 Professional Behavior

Outcome: Exhibit and practice interpersonal skills and professional behavior.

SLO Area (select one): Professional Behavior (Grad)

Assessment Methods Checklist: Other - please describe in the Assessment Method Narrative.

Assessment Method Narrative:
Students are assessed for professionalism in the Supervised Patient Care and Clinical Skills courses (VEM5200, VEM5202, VEM5203, and VEM5204 - running in semesters 1-4 of the DVM Program) and on the Student Clinical Evaluation Rubric at the end of each clinical clerkship (running in semesters 5, 6, and 9 of the DVM Program).

	Summer	**Fall**	**Spring**
Year 1 (Phase 1)		Semester 1 - Didactic	Semester 2 - Didactic
Year 2 (Phase 2)		Semester 3 - Didactic	Semester 4 - Didactic
Year 3 (Phase 3)	Semester 5 - Clinical	Semester 6 - Clinical	Semester 7 - Didactic
Year 4 (Phase 3)		Semester 8 - Didactic	Semester 9 - Clinical

SLO Not Assessed This Year:

Threshold of Acceptability: 98

How many students did you assess for this outcome?: 486

How many students met the outcome?: 482

What percentage of students met the outcome?: 99

Does this meet your threshold of acceptability?: Yes

Results:

In the 2021-2022 academic year, 126 of 129 first-year students passed met the professionalism requirement for Supervised Patient Care and Clinical Skills courses (VEM5200 and VEM5202).

All 120 second-year students met the requirements for Supervised Patient Care and Clinical Skills courses (VEM5203 and VEM5204).

236 of 237 third/fourth year (clinical phase) students met the requirements for professionalism according to the Student Clinical Evaluation Rubrics collected at the end of each rotation.

SLO 4 Competencies (Skills)

Outcome: Exhibit the spectrum of clinical competencies needed to practice veterinary practice.

SLO Area (select one): Skills (Grad)

Assessment Methods Checklist: Practica/Internship
                              Externship

Assessment Method Narrative:
Students will be assessed using the end-of-rotation Student Clinical Evaluation Rubric. Rubrics are tailored to each clinical experience. Some are letter grades and some are pass fail, but all have categories that are tied to the UF CVM Educational Framework's Competencies (adapted from the CBVE Framework - Competency-Based Veterinary Education Framework). Student responses that were sited as less-than satisfactory (or passing with D-) will be reviewed. Sores of "unsatisfactory" or "E" would deem a student as not meeting this SLO.

SLO Not Assessed This Year:

Threshold of Acceptability: 98

How many students did you assess for this outcome?: 237

How many students met the outcome?: 234

What percentage of students met the outcome?: 100

Does this meet your threshold of acceptability?: Yes

Results:

Of the 237 students on clinical rotations during the 2021-2022 Academic Year, 234 students (or 98.7 percent) demonstrated satisfactory efforts according to their clinical evaluations at the end of each rotation.

Note

While the Clinical Evaluation Rubric has served the college for many years, it was recently reviewed by college faculty and the Curriculum Committee and deemed insufficient for our current needs. The current rubric includes language that does not align with the UF CVM Educational Framework or the CBVE Framework.

A recommendation was made to move to a more formative rubric, that will allow faculty and administrators to track student progress across the clinical phase and provide better feedback to students as to where they are in their clinical training. The new rubric will also better align with the language found in the UF CVM and CBVE Frameworks. The new rubric is scheduled to be rolled out in May 2023 (to use in the 2023-2024 reporting cycle).

Programmatic Use of Results Item

Improvement Types Checklist: Modified one or more SLO assessment methods.

Use of Results for Improvement Narrative - Required:

The Associate Dean of Academic and Student Affairs and the Outcomes and Assessment Coordinator reviewed the results of the DVM Program's goals and student learning outcomes.

Results of our Program Goals demonstrate the DVM Program has continued to produce high-quality candidates. The results of our SLOs demonstrate competence of our current students and graduates.

However, while the program goals and SLOs are still applicable to the DVM Program, the assessment methods tied to the SLOs were found to be insufficient.

SLO 1: Student grades in the didactic curriculum were historically used to demonstrate student mastery of the foundational knowledge required in veterinary medicine. The use of student grades does not ensure students have acquired the knowledge intended in the didactic curriculum, as course grades can often include criteria such as participation and attendance. It was determined that a more rigorous method would be deployed for this SLO. High-stakes exam items were tagged to the UF CVM Educational Framework's Competencies. An analysis of student performance for each competency was used to determine student attainment of foundational knowledge in the veterinary medicine knowledge base. Such knowledge, will help faculty and administrators understand how students are progressing toward clinical competence. The threshold of acceptability was also altered for this SLO as the assessment method has changed.

SLO 2: Student grades in the clinical curriculum was used to demonstrate mastery of technical skills. This was an indirect measurement and not an accurate record of student attainment of technical skill. It was determined that student submissions of "Student Learning Opportunities" - procedural skills observed and approved by faculty - would be more appropriate in assessing student attainment of technical skills.

SLO 4: Exhibition of clinical competence can be assessed a variety of ways. The clinical evaluation form has been used to assess this SLO previously, and will continue to serve this purpose. However, the rubric itself was reviewed by college faculty and the Curriculum Committee and it was determined to not satisfy the language used in competency-based veterinary education documentation and materials that have been published in recent years. A transition to a more formative rubric will take place in May 2023 and student data will be reported during the 2023-2024 reporting cycle.

Program Results Not Reported This Year:

Program Results Reporting Complete: true

DVM Veterinary Medicine AAP Detail

Providing Department: Veterinary Medicine (DVM)

Assessment Cycle:

<center>**Assessment Cycle**</center>

Analysis and Interpretation: From <u>Summer to Spring</u>
Improvement Actions: Completed by <u>Fall of the Following Year</u>
Dissemination: Completed by <u>Fall of the Following Year</u>

Year SLOs	18-19	19-20	20-21	21-22	22-23	23-24
Content Knowledge						
#1: Identify, describe, explain and apply the foundational knowledge pertinent to established and emerging areas of veterinary practice.	X	X	X	X	X	X
Skills						
#2: Apply the technical skills required for veterinary practice.	X	X	X	X	X	X
#4: Exhibit the spectrum of clinical competencies needed in veterinary practice.	X	X	X	X	X	X
Professional Behavior						
#3: Exhibit and practice interpersonal skills and professional behavior.	X	X	X	X	X	X

SLO Assessment Rubric:

Rubric examples are attached to their corresponding SLOs.

Assessment Oversight:

Name	Department Affiliation	Email Addresses	Phone Number
Amanda House, DVM	Associate Dean, Academic and Student Affairs, College of Veterinary Medicine	housea@ufl.edu	(352) 294-4380
Dana Zimmel, DVM	Dean, College of Veterinary Medicine	zimmeld@ufl.edu	(352) 294-4252
Sarah Bell, M.Ed.	Outcomes and Assessment Coordinator, College of Veterinary Medicine	scorbitt@ufl.edu	(352) 294-4065

Methods and Procedures - Undergraduate and All Certificate Programs:

Curriculum Map - Undergraduate Degree Programs:

Research :

The Doctor of Veterinary Medicine degree is not a research degree. However, students are taught to evaluate the scientific bases of knowledge and incorporate new knowledge into the practice of veterinary medicine. This occurs throughout the curriculum as faculty members share their research findings, along with those of others, as they lecture and supervise clinical rotations. Students are exposed to a wide range of basic research (e.g., physiology, neuroscience, infectious disease) and applied research (e.g., oncology, radiology, orthopedic diseases), which is facilitated by the fact that most faculty members teach in the same discipline where they perform their scholarly activities. Students that wish to graduate with honors or high honors are required to complete an indivdualized investigation course in addition to attaining the appropriate GPAs. This course involves conducting a research project under faculty supervision, writing a paper suitable for publication, and providing either an oral or poster presentation of the results.

SLO Measures - Graduate and Professional Programs:

Program Goal #1: Students are assessed indirectly with surveys for graduates, alumni, and employers. Participants are asked to review DVM student competence in relation to the UF CVM Competencies.

Program Goal #2: Students are assessed directly with the NAVLE - North American Veterinary Licensure Examination.

SLO #1: Students are assessed using criterion-referenced assessments in the didactic curriculum. Exam items are tagged in ExamSoft (testing platform) to assess student attainment of foundational knowledge toward each of the UF CVM Competencies.

SLO #2: Students are assessed using the Graduation-Required Student Learning Opportunities - procedures observed and approved by faculty in either the Supervised Patient Care and Clinical Skills courses or the Clinical Rotations. After performing the procedure, students submit the Student Learning Opportunity to the observing faculty for review and approval or rejection.

SLO #3: Students are assessed using the Student Clinical Evaluation Rubric and the Supervised Patient Care and Clinical Skills Lab courses. Professionalism is a criterion on the rubric for most, but not all, of the clinical rotations in the DVM Program. Criterion are selected by faculty and tailored to the specific clinical experience. In the Supervised Patient Care and Clinical Skills series of courses, students' adherence to specific course policies are used to determine professionalism. Such policies are outlined in the course syllabi.

SLO #4: Students are assessed using the Student Clinical Evaluation Rubric. At the end of each clinical rotation, students are assessed on a rubric tailored to each clinical experience. Students are evaluated on their ability to demonstrate competence across specific criteria that align with the UF CVM Competencies.

Assessment Timeline - Graduate and Professional Programs:

	Didactic Curriculum (Years 1 and 2)	Clinical Curriculum (Years 3 and 4)

SLO #1 (Knowledge)	Core Didactic Examinations (Yrs 1-2)	
SLO #2 (Technical Skill)	Skills Lab Activities (Yrs 1-2)	Core Clerkship Procedure Submissions (Yrs 3-4)
SLO #3 (Professional Behavior)	Skills Lab Activities (Yrs 1-2)	Core Clerkship Rubric (Yrs 3-4)
SLO #4 (Skills - Competency)		Core Clerkship Rubric (Yrs 3-4)