

VEM5854 Clinical Pathology Clerkship (Elective)

SEMESTER: FALL 2020

CREDIT HOURS: 1

GRADING SYSTEM: A-E GRADING

PHASE: 3

Course Coordinator

Name: Sarah Beatty, DVM, Diplomate ACVP (Clinical)

Preferred Contact Method: [Canvas Course Message/Inbox](#)

Email: skbeatty@ufl.edu

Office Hours: By appointment, weekly office hours listed on Canvas

Course Description

This course will focus on how to obtain, process, and evaluate high quality clinical pathology specimens. Students will review and interpret hematology, serum biochemistry, and/or endocrinology cases in a clinical context as well as microscopic findings in blood, urine, other body fluids, organs and tissue masses, and learn the practical application of cytology as it applies to veterinary medicine.

Student Learning Outcomes

After successful completion of this course, students will be able to:

1. Remember clinical indications for diagnostic sample acquisition
2. Understand how to collect and prepare high quality clinical pathology samples
3. Identify common pre analytic errors and steps to mitigate to perform high quality laboratory medicine
4. Develop a systematic approach and skill set to evaluate and interpret hematology, coagulation, chemistry, blood gas, urinalysis, and endocrinology sample
5. Analyze a complete blood count including peripheral blood film, clinical chemistry panel, urinalysis, coagulation panel, and blood gas data in a clinical case context
6. Apply fundamental concepts of the acquisition, evaluation, and interpretation of cytologic preparations of tissue and fluid samples for application and diagnosis of clinical patient
7. Cultivate critical thinking skills and cooperation among peers

Course Schedule

This daily schedule contains topics, assignments, and exams. Please refer to Canvas for updates and announcements to any changes to this schedule. Each group will rotate through the following modules

on different dates and times. All sessions will be held synchronously via Zoom. *EXACT Schedules are posted in Canvas along with a Zoom linked Calendar.. See Appendix B for full Example Schedule.*

<i>Date and Time</i>	<i>Topic/Module/Unit</i>	<i>Instructors</i>	<i>SLO # Above</i>	<i>Instructional Hours</i>
Week 1	Chemistry Discussion A (Canvas Quiz)	Beatty, Lanier, Dolan, and Sandoval	1-7	2.0
Week 1	Chemistry Discussion B (Canvas Quiz)	Beatty, Lanier, Dolan, and Sandoval	1-7	2.0
Week 1	Cytology Discussion (Canvas Quiz)	Beatty, Lanier, Dolan, and Sandoval	1-7	2.0
Week 1	Hematology Discussion (Canvas Quiz)	Beatty, Lanier, Dolan, and Sandoval	1-7	2.0
Week 1	Fluids/Urinalysis Discussion (Canvas Quiz)	Beatty, Lanier, Dolan, and Sandoval	1-7	2.0
Due at end of Week 1	Blood Film SOP Assignment	Beatty	2-3	
Week 2	Chemistry C Discussion (Canvas Quiz)	Beatty, Lanier, Dolan, and Sandoval	1-7	2.0
Week 2	Cytology and Fluids/UA Laboratory (Canvas Assignment)	Beatty, Dolan	1-7	2.0
Week 2	Hematology Laboratory (Canvas Assignment)	Beatty, Lanier, Dolan, and Sandoval	1-7	2.0
Week 2	Laboratory Practical Experience (Canvas Assignment)	Beatty, Sandoval	3-6	2.0
Week 2	Case Discussions	Beatty, Lanier, Dolan, and Sandoval	1-7	2.0
December 14 th 8:00am-10:00am	Final Practical Examination	Beatty	1-7	1.0

Course Outline: Students will be provided with the syllabus and resources before starting the rotation via the Canvas website. The packet of information (Syllabus and “Course at a Glance”) must be read by the students before starting the rotation. During the course, students should be prepared to discuss the material in the packet and associated assigned readings. Students are expected to have a basic understanding of clinical pathology from the core hematology and clinical pathology courses as well as the material from the elective advanced hematology and cytology courses. The previous course notes can be reviewed for most conditions as a guideline through the rotation. Students are expected to present a case logically during discussion rounds (signalment, presenting complaint, history, physical examination findings, problem list, differential diagnosis, plan and diagnosis and treatment options if indicated). Primary literature searches for relevant information will be needed. Generally, daily and assigned cases will be presented during rounds should be reviewed prior to the class meeting. Because the case should have been worked up in entirety, the student should be well prepared to show and discuss the diagnostic findings and the recommended treatment option for the case. Information detailing topics covered during the course can be found below in the Course Materials heading in Instructional Units. The course will be delivered online, synchronously via Zoom sessions. Students are allowed to self-select their Group/two-hour daily meeting time and are responsible for ensuring their internet and device are in working order. Students must attend their assigned daily session, unless the course coordinator is contacted and an excused absence is documented. During the Zoom sessions, the student will be requested to utilize the web camera.

See Appendix B for Example Schedule. EXACT Schedules are posted in Canvas.

Required Textbooks and/or Course Materials

- Access to online course slides via Aperio (must use VPN and download ImageScope for iPad or Windows)
- Google Chrome Browser for image and video viewing during course and for examination
- Functioning tablet, laptop, or computer with reliable internet connection

Recommended Textbooks and/or Course Materials

- Harvey - Veterinary Hematology: A Diagnostic Guide and Color Atlas
- Stockham and Scott - Fundamentals of Veterinary Clinical Pathology, 2nd ed.
- Valenciano and Cowell - Diagnostic Cytology and Hematology of the Dog and Cat, 4th Ed AND/OR Raskin and Meyer - Atlas of Canine and Feline Cytology, 3rd ed.
- Course notes: VEM5221 Veterinary Clinical Pathology Core (2nd year course), VEM5303 Advanced Small Animal Hematology (3rd year course), VEM5222 Cytodiagnosis in Veterinary Practice (3rd year course)
- Supplemental journal articles will be provided to the students for additional information on a case by case basis.

Methods of Evaluation

Grades will be calculated based on the following:

Item	Weight
Quizzes, Assignments, Online Activities, Participation/Professionalism (Specifics in Canvas: "Course at a Glance")	50%
Final Practical Examination	50%
Total	100 %

Note: Late assignments will not be accepted. Quizzes and the final exam will be online in Canvas using HonorLock proctoring.

Grading Scheme

Course grades will be assigned based on the following grading scheme. This grading scale is **final**. The instructor may choose to apply a positive curve to the scale to benefit students as deemed appropriate.

Letter	Scale
A	100.00 – 92.50
A-	92.49 – 89.50
B+	89.49 – 86.50
B	86.49 – 82.50
B-	82.49 – 79.50
C+	79.49 – 76.50
C	76.49 – 72.50
C-	72.49 – 69.50
D+	69.49 – 66.50
D	66.49 – 62.50
D-	62.49 – 59.50
E	59.49 – 0

Course Policies

Grading scheme: Grading will be determined by objective and subjective methods consisting of a final practical examination (50%); daily quizzes, case assignments, laboratory assignments, and participation/professionalism in discussion and laboratory sessions (50%). Complete point assignment is provided in the Course-at-a-Glance document in the Course Overview module on Canvas. Daily quizzes are open book/note and may be completed with students in the same section (e.g. Group A4). There are 5 required SLOs for the course: Demonstrate the ability to present case findings and summarize conclusions verbally, Interpret a body cavity fluid analysis, Interpret a CBC, Interpret a chemistry profile, Interpret a urinalysis that must be completed once over the rotation. Student Learning Outcomes (SLOs) must be turned into the instructor via the UF CVM Curriculum Map by 5pm on the day they are completed. The participation and professionalism grade will encompass the ability to provide differential diagnosis and prioritize problem lists, creation of a diagnostic plan, interpretation of diagnostic tests, as well as student's demonstration of their knowledge base, critical thinking skills, communication and professionalism. The final practical examination is closed note, must be completed individually, and will be proctored through Exam soft using Canvas and Honor lock. The final practical examination will cover required readings and focus on information covered in small group sessions, discussions, provided materials and references, and laboratory sessions. In addition, to earn a letter grade, all required SLOs must be completed and submitted by the student in curriculum map by the date

of the final practical. Late SLOs after the final practical examination will reduce the participation & professionalism grade.

Curriculum Policies

DVM curriculum policies are consistently held and reinforced across all DVM courses. Please visit the DVM webpage and review the curriculum policies listed within the [Online Student Handbook](#).

The College of Veterinary Medicine asks that students, when possible, have cameras turned on for courses in the professional curriculum, which facilitates participation and professional communication. Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Students with Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting www.disability.ufl.edu/students/get-started. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester. **Students in UF Health Sciences programs should be mindful that unique course accommodations may not be applicable in a clinical, fieldwork or practicum setting. Thus, planning a semester in advance with the DRC Health Sciences Learning Specialist, Lisa Diekow ldiekow@ufsa.ufl.edu , is highly encouraged.**

The DRC is located on the main UF campus. ASA (Office for Academic and Student Affairs) works closely with the DRC to ensure student accommodations are met in the classroom and during exams. Melissa Cox in ASA assists in coordinating exams and meeting recommended disability-related requirements for students with accommodations (melissacox@ufl.edu).

Course and Instructor Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available on the [GatorEvals Webpage](#). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via the [Online Platform](#). Summaries of course evaluation results are available to students at the [GatorEvals Public Results Webpage](#).

Appendix A: Faculty Lecturers

Faculty Name: Christopher Lanier DVM, MS, Diplomate ACVP (Clinical)

Office location & office hours: VC-2A, by appointment

Email: cjlanier88@ufl.edu

Preferred method of contact: Email

Clinical Pathology Resident Instructors:

Dr. Jackie Dolan, email: dolanjk@ufl.edu

Dr. Kamila Sandoval, email: ksandoval@ufl.edu

Dr. Laura Cagle, email: la.cagle@ufl.edu

Office location & office hours: VS-21, by appointment

Preferred method of contact: Email

Appendix B: EXAMPLE SCHEDULE

This is an example of what the schedule will look like in Canvas. All sessions will be delivered synchronously via Zoom. Please refer to Canvas for your EXACT schedule and links to meetings in Zoom.

Date/Time	EXAMPLE GROUP X1	EXAMPLE GROUP X2	EXAMPLE GROUP X3	EXAMPLE GROUP X4
November 30 th 8:30am-10:20am EST	Cytology Discussion See Canvas for Details	Chemistry Discussion A See Canvas for Details	Cytology Discussion See Canvas for Details	Chemistry Discussion A See Canvas for Details
December 1 st 8:30am-10:20am EST	Chemistry Discussion A See Canvas for Details	Hematology Discussion See Canvas for Details	Hematology Discussion See Canvas for Details	Cytology Discussion See Canvas for Details
December 2 nd 8:30am-10:20am EST	Fluid/Urinalysis Discussion See Canvas for Details	Chemistry Discussion B See Canvas for Details	Fluid/Urinalysis Discussion See Canvas for Details	Chemistry Discussion B See Canvas for Details
December 3 rd 8:30am-10:20am EST	Hematology Discussion See Canvas for Details	Cytology Discussion See Canvas for Details	Chemistry Discussion A See Canvas for Details	Hematology Discussion See Canvas for Details
December 4 th 8:30am-10:20am EST	Chemistry Discussion B See Canvas for Details	Fluid/Urinalysis Discussion See Canvas for Details	Chemistry Discussion B See Canvas for Details	Fluid/Urinalysis Discussion See Canvas for Details
December 7 th 1:00pm-2:50pm EST	Cytology Lab See Canvas for Details	Chemistry Discussion C See Canvas for Details	Cytology Lab See Canvas for Details	Chemistry Discussion C See Canvas for Details
December 8 th 8:30am-10:20am EST	Chemistry Discussion C See Canvas for Details	Cytology Lab See Canvas for Details	Chemistry Discussion C See Canvas for Details	Cytology Lab See Canvas for Details
December 9 th 8:30am-10:20am EST	Hematology Lab See Canvas for Details	Hematology Lab See Canvas for Details	Hematology Lab See Canvas for Details	Hematology Lab See Canvas for Details
December 10 th 8:30am-10:20am EST	Laboratory Cases See Canvas for Details	Laboratory Cases See Canvas for Details	Laboratory Cases See Canvas for Details	Laboratory Cases See Canvas for Details
December 11 th 8:30am-10:20am EST	Case Discussions See Canvas for Details	Case Discussions See Canvas for Details	Case Discussions See Canvas for Details	Case Discussions See Canvas for Details

December 14th Exam soft/Canvas Honorlock 2 hours

Final Practical- All Groups