



## ANSC 258 Clinical Laboratory Techniques II Lab

**INSTRUCTOR:** Sam Geiling, RVT

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**TELEPHONE:** 236-9107

**EFFECTIVE DATE:** Fall, 2021

### WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

*Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide the Ko'olau region of O'ahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.*

### CATALOG DESCRIPTION

A continuation of ANSC 151 and 151L, this course provides students with additional instruction and hands-on experience with laboratory tests commonly used in veterinary practice. Topics include: 1) identification of internal parasites 2) performance and evaluation of microbiologic and serologic tests, 3) collection & evaluation of cytological samples 4) veterinary necropsy procedures. Included in this course is a review of the anatomy and physiology of major body systems and an overview of common diseases seen in veterinary practice. This course is intended for students entering veterinary assisting, veterinary technology or other animal-related fields. (3 hours laboratory)

Pre-Requisite(s): Admission in the Veterinary Technology Program and a grade of "C" or better in all completed ANSC courses. Co-Requisite(s): ANSC 258

### STUDENT LEARNING OUTCOMES

As a result of taking this course, students can expect to attain the following outcomes:

- Properly package, handle and store specimens for laboratory analysis
- Perform parasitological tests to identify select internal and external parasites of veterinary medicine
- Collect, culture, and identify bacteria from animal tissues and perform sensitivity testing
- Perform a postmortem examination of a non-preserved animal

**This course requires students to complete hands-on skills as outlined by the AVMA. Failure to complete any of the required hands-on skills will result in a failing grade for the course.**

### LEARNING RESOURCES

1. Laboratory Manual Sam Geiling, RVT

### COURSE TASKS

- 1) Attend lab at scheduled times, on time and in proper uniform.
- 2) Participate in lab activities, including a necropsy procedure
- 3) Complete final practicum.
- 4) Record results of lab activities in lab notebook.
- 5) Present Case Study

### COURSE CONTENT

#### *Concepts or Topics*

- Laboratory safety
- Sample handling, storage, and preparation
- Use of lab equipment (microscopes, blood analyzers, centrifuges, refractometers)
- Perform microbiology testing
- Perform immunology testing
- Perform parasitological procedures
- Understanding how performing these laboratory procedures will assist a veterinarian in a diagnosis.

## ASSESSMENT TASKS AND GRADING

**ATTENDANCE:** 20 points – Attendance will be taken at the beginning of each class period. Both tardiness and early departure from class are considered forms of absenteeism. Students are ***NOT entitled to any unexcused absences and will be docked 20 points for an absence.*** If a student has an emergency or is too ill to come to class, the instructor should be notified via email prior to class. A doctor's note or documentation of extenuating circumstances will be required within 48 hours of the absence. Students with more than 5 absences, excused or unexcused, may have points deducted or receive an "F" grade in the class. For absences due the observance of religious holidays, jury duty, and for calls to active duty, students must confer with the instructor prior to the absence. Students absent from class for any reason are still responsible for all work missed. In the event of severe weather or other emergency, students are expected to check-in via Lulima for instructor updates. Students who stop attending class, but do not formally withdraw, may receive an "F" grade and face financial aid repercussions in future semesters as a result. Because most laboratory sessions require special equipment and preparation, make-up labs will NOT be given. Students are expected to participate the ENTIRE lab period, including performing assigned clean-up duties. Any student who misses clean-up, leaves early, or does not complete all assigned lab activities will have points deducted.

**LAB NOTEBOOK and ACTIVITIES:** 100 points – Students are expected to record the results and interpretation of all lab procedures in their laboratory notebook. The format for the notebook will be discussed on the first day of class. The notebook will be collected twice.

**QUIZZES:** 100 points – Students should expect a quiz most class periods and are expected to keep up with the material and be prepared every class. Each quiz is worth 10 points.

**NECROPSY:** 20 points – Students will complete an assignment relating to necropsy prior to that lab.

**PRACTICUM REVIEW:** 10 points total – Students are expected to complete reviews prior to the final practicum. Instructions: each student will write 10 questions with the CORRECT answers from the ASSIGNED chapters for the upcoming exam, post it to the LECTURE Lulima under resources, and bring one copy to class the lab period BEFORE the REVIEW.

**LAB PRACTICUM:** 100 points – The student will take a cumulative lab practicum to demonstrate knowledge and understanding of information presented in lab activities. Format and material will be discussed in class. There will be no make-up practicums.

Attendance	20
Lab Notebook	100
Quizzes	100
Necropsy	20
Practicum Review	10
<u>Practicum</u>	<u>100</u>

Total                350

	Letter
90-100%	A
80-89%	B
70-79%	C
60-69%	D
0-59%	F

## ADDITIONAL INFORMATION

Student Resources

**Ka Piko** is WCC's academic support hub. Please visit: <https://windward.hawaii.edu/kapiko/>

**TRiO student support services:** [https://windward.hawaii.edu/TRIO/Student\\_Support\\_Services.php](https://windward.hawaii.edu/TRIO/Student_Support_Services.php)

**MySuccess:** Students may be referred for extra help or advising through MySuccess. Students can also explore resources at [MySuccess.Hawaii.edu](https://MySuccess.Hawaii.edu) and [windward.hawaii.edu/MySuccess](https://windward.hawaii.edu/MySuccess)

**Quizzes** will be given during the first 10-15 minutes of lab. If you're late, you won't be allowed additional time.

If you miss a quiz due to a **serious illness or legitimate emergency**, you **must** contact the instructor **within 48 hours** to arrange a time to take a make-up quiz. You may need to provide a doctor's note. If you miss the final practicum for a legitimate reason, contact the instructor for further instructions.

**STUDENT PREPAREDNESS:** Students are expected to come to lab prepared to participate. This means completing the lab notebook section that correlates to the lab activity prior to lab. The instructor may ask to see a student's lab notebook to ensure it is completed. If it isn't, points may be deducted from the lab activities grade.

**LAB ATTIRE, CONDUCT, AND HYGEINE** For the uniform required in the lab, see the Veterinary Technology Program Student Handbook. Because labs often involve working with chemicals or hazardous materials, students **MUST** wear close-toed shoes and white, full-length lab coats. In addition, some lab activities will require students to wear gloves and safety glasses (provided by the college). Students failing to dress appropriately for lab will not be permitted to participate in laboratory exercises and will be considered absent. Students engaged in conduct that threatens themselves or others in the lab will be refused access to the lab for the remainder of the semester and receive an "F" grade for the course.

#### LAB SAFETY RULES

- 1) Be familiar with lab safety procedures and take appropriate precautions at all times to insure the safety of all lab students.
- 2) Follow all instructions carefully, especially when hazardous materials are being used.
- 3) Know the locations of important safety equipment: eyewash, safety shower, fire extinguisher, and first aid kit.
- 4) Report all injuries to the instructor immediately.
- 5) Dress appropriately for lab. Closed-toe shoes are required for ALL labs. Safety glasses and gloves are required for labs utilizing chemicals, bodily fluids, or hot-plates.
- 6) Report any hazardous conditions (e.g. chemical spills or broken glass) to the instructor immediately.
- 7) NO FOOD ALLOWED IN LAB
- 8) Chemicals used in lab may be poisonous, corrosive, or flammable. No chemicals, even those known to be safe, should be ingested or touched with un-gloved hands unless you are specifically directed to do so by your instructor.
- 9) Know how to safely operate all lab equipment and tools (e.g., microscopes, scalpels, and hematology supplies). Safe usage will be demonstrated by your instructor.
- 10) Clean all lab supplies and return them to their proper location before leaving lab.
- 11) Treat all organisms, living or dead, with care and respect. Use gloves when handling dissected specimens.
- 12) Place broken glass, sharps, and dissected specimens in the appropriate receptacles (NOT IN THE TRASH!)

- 13) Unless otherwise instructed, chemical wastes should NOT be disposed of down the drain.
- 14) Human tissues and bodily fluids (e.g., saliva and blood) must be disposed of in appropriate bio-hazard containers (NOT IN THE TRASH!)
- 15) Wash your hands immediately following each lab to reduce the possibility of contamination or infection.

## HOW TO SUCCEED IN THIS COURSE

- 1) Science courses at WCC generally require a minimum of 3 hours of independent study for **each** hour of class; therefore you should expect to spend **9 hours per week studying OUTSIDE of class** to fully understand the complexities of the wide range of information presented in this class.
- 2) Come to lab with your lab notebook, lab sheets, and an understanding of the steps involved to perform lab activities. Lab tests will be covered in class, but the goal is to get to work and perform these tests to spend the most time possible being able to observe specimens in the microscope and learn normal vs. abnormal results.
- 3) This class covers a variety of clinical laboratory techniques that requires a good understanding of animal anatomy and physiology. You may need to review your physiology textbook and class notes to fully understand how to use and apply diagnostic laboratory tests.

## ACADEMIC DISHONESTY

**Students involved in academic dishonesty will receive an "F" grade for the course.**

Work submitted by a student must be the student's own work. The work of others should be explicitly marked, such as through use of quotes or summarizing with reference to the original author. In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s):

Students will receive a failing grade for plagiarized assignments.

All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

## DISABILITIES ACCOMMODATIONS

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. **Ann Lemke can be reached at 235-7448, [lemke@hawaii.edu](mailto:lemke@hawaii.edu)**, or you may stop by Hale 'Ākoakoa 213 for more information.

## TITLE IX

Title IX prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. Specifically, Title IX prohibits sex discrimination; sexual harassment and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault; sexual exploitation; domestic violence; dating violence; and stalking. For more information regarding your rights under Title IX, please visit: [https://windward.hawaii.edu/Title\\_IX/](https://windward.hawaii.edu/Title_IX/).

Windward Community College is committed to the pursuit of equal education. If you or someone you know has experienced sex discrimination or gender-based violence, Windward CC has resources to support you. To speak with someone confidentially, contact Karla Silva-Park, Mental Health Counselor, at 808-235- 7468 or [karlas@hawaii.edu](mailto:karlas@hawaii.edu) or Kaahu Alo, Designated Confidential Advocate for Students, at 808-235- 7354 or [kaahualo@hawaii.edu](mailto:kaahualo@hawaii.edu). To make a formal report, contact the Title IX Coordinator at 808-235-7393 or [wcctix@hawaii.edu](mailto:wcctix@hawaii.edu).

*Windward Community College is an equal opportunity, affirmative action institution.*

**ALTERNATE CONTACT INFORMATION**

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

Location: Alakai 121

Phone: 808-235-7422

Email: wccaa@hawaii.edu

<b>Week</b>	<b>Topic</b>	<b>Reading</b>
<b>1</b>	Course Intro – Parasitology – Intro, Language, Sample Collection and Diagnostic Techniques <b>LAB: Review lab rules and Fecal, Blood smear, UA</b>	Hendrix: Ch 1, 2, 17
<b>2</b>	ASCAROIDA Micro – Intro, equipment, samples, staining <b>LAB: Fecal, Blood smear, UA, Microbiology (staining)</b>	Hendrix: 3, 4 Sirois: Pages 284-289 Sirois: 37-40
<b>3</b>	STRONGYLOIDA, TRICHOSTRONGYLOIDA Micro – Culture Techniques and Testing <b>LAB: Fecal, Blood smear, UA, Micro staining, culture, tests</b>	Hendrix: 4 Sirois: Pages 289-292 Sirois: 41, 43
<b>4</b>	RHABDITOIDA Immunology – Intro <b>LAB: Fecal, Blood smear, UA, Micro</b>	Hendrix: 4 Sirois: Page 292 Sirois: 19
<b>5</b>	METASTRONGYLOIDA Immunology – Tests <b>LAB: Fecal, Blood smear, UA, Micro, SNAP/RIM</b>	Hendrix: 4 Sirois: Pages 292 - 293 Sirois: 20-23
<b>6</b>	TRICHUROIDA – OXYUROIDA – SPIUROIDA – DRACUNCULOIDA - DIOCTOPHYMOIDA – FILAROIDA <b>LAB: Fecal, Blood smear, UA, Micro, SNAP/RIM</b>	Hendrix: 4 Sirois: 293-298
<b>7</b>	REVIEW <b>LAB: REVIEW</b>	
<b>8</b>	EXAM 1 <b>LAB:</b>	
<b>9</b>	CESTODES Mycology <b>LAB: Fecal, Blood smear, UA, Micro</b>	Hendrix: 5, 6 Sirois: Pages 299-306 Sirois: 44
<b>10</b>	CESTODES Blood Typing <b>LAB: Fecal, Blood smear, UA, Micro</b>	Hendrix: 5, 6 Sirois: Pages 299-306 Sirois: 21
<b>11</b>	TREMATODES AND ACANTHOCEPHALANS Intradermal Testing <b>LAB: Fecal, Blood smear, UA, Micro</b>	Hendrix: 7-9 Sirois: Pages 306-312 Sirois: 22
<b>12</b>	PROTOZOA AND RICKETTSIA Sensitivity Testing <b>LAB: Fecal, Blood smear, UA, Micro</b>	Hendrix: 11 Sirois: Pages 313-325 Sirois: 42
<b>13</b>	INSECTS Disorders of the Immune System <b>LAB: Fecal, Blood smear, UA, Micro</b>	Hendrix: 12, 13 Sirois: Pages 326-333 Sirois: 24
<b>14</b>	TICKS <b>LAB: Fecal, Blood smear, UA, Micro</b>	Hendrix: 12, 13 Sirois: Pages 333-334
<b>15</b>	MITES <b>LAB: Fecal, Blood smear, UA, Micro</b>	Hendrix: 12, 13 Sirois: Pages 334-337
<b>16</b>	REVIEW <b>LAB: Review</b>	

<b>FINAL</b>	TBA:
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