



UNIVERSITY of HAWAII®  
**WINDWARD**  
COMMUNITY COLLEGE

## **ANSC 151L: Clinical Laboratory Techniques Lab**

1 Credit1 (CRN: 62206, 62208, 62081)

CRN: 62206 – M 12:00-2:45pm

CRN: 62208 – T 12:00-2:45pm

CRN: 62081 – W 12:00-2:45pm

**INSTRUCTOR:** Matthew Tsuda

**OFFICE:** Hale Imiloa 104

**OFFICE HOURS:** F 11:00-2:00pm

**TELEPHONE:** 808-343-7507      **EMAIL:** mtttsuda@hawaii.edu

**EFFECTIVE DATE:** Spring 2024

### **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**

Provides students with the background knowledge needed to perform and interpret laboratory techniques commonly used in veterinary practice. Topics include: Homeostatic relationships, cytology, histology, parasitology and clinical physiology of major body systems. Includes a discussion of common disorders affecting major body systems and the techniques used for diagnosis. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields.

### **STUDENT LEARNING OUTCOMES**

1. Properly package, handle and store specimens for laboratory analysis.
2. Demonstrate proficiency in the use of veterinary lab equipment (e.g. microscopes, blood chemistry analyzers, centrifuges, and refractometers).
3. Determine proper maintenance and quality control procedures necessary to ensure accurate results.
4. Properly carry out analysis of laboratory specimens, including urinalysis, CBC, blood chemistry and common cytological and parasitological procedures.
5. Use critical thinking to analyze and interpret clinical data to determine if a need exists for additional laboratory tests that will provide useful diagnostic information.

### **COURSE TASKS**

- 1) Attend labs, on time
- 2) Complete assigned readings

- 3) Participate in class discussions and group work
- 4) Complete 10 quizzes
- 5) Complete 2 practicums

## ASSESSMENT TASKS AND GRADING

**ATTENDANCE:** – Please refer to the attendance policy outlined within the Veterinary Technology Student Handbook for full details.

Attendance is expected for every class and will be documented prior to the start of all labs. Any unexcused absences will be subjected to a loss of 10 participation points **and** use of our demerit system (refer to student handbook.) Any absences must be communicated with your lecturer prior or on the day of the absence. Any and all absences will not be considered excused without documentation. Arriving more than 10 minutes late may be considered an absence. **Overall, prompt communication is essential for working out plans for making up assignments, activities, and lectures.**

**~~COVID-19~~** If you are feeling sick and/or exhibiting any of the signs or symptoms associated with COVID-19, do not attend your class, please contact your physician immediately for the appropriate steps to acquire a test and initiate quarantine. You must contact your instructor immediately and provide the documentation from your physician regarding your health status.

**LAB MANUAL ASSIGNMENTS:** 45 points - Complete the Lab Manual that accompanies the textbook. (We will NOT complete the parasitology section.)

**QUIZZES:** 50 points total – Students should expect a quiz many class periods and are expected to keep up with the material and be prepared every class. Each quiz is worth 10 points.

**PARTICIPATION:** 20 points – Students will need to participate in lab activities, including group work, clinical chemistry procedures, and review sessions.

**LAB NOTEBOOK:** 40 points total – The lab notebook will be collected at the beginning of both practicums. The lab notebook must be completed up to each designated page upon each submission.

**PRACTICUM:** 175 points total – There will be two practicums held within this semester.

## ASSIGNMENT POLICIES

1. **Late Submissions** - If you miss an assignment due to a **serious illness or legitimate emergency**, you **must** contact the instructor within **24 hours** to discuss making up assignments. You may need to provide documentation for evidence of emergency or illness.
2. **Spelling** – Due to the importance of spelling in a medical setting, any spelling error may be marked as incorrect. This is especially true for critical terminologies.
3. **Dress Code** - Students are required to observe all dress code policies (see VETA handbook for full details.) **Close-toed shoes, long pants, and a white lab coat are required for all labs. Visible jewelry and nail polish are not allowed.**
4. **PowerPoints** – The PowerPoints created for this course was intended to be opened with Microsoft PowerPoint. This is because there may be transitions and animations that were meant to be played in presentation mode. PowerPoints can be opened by other third-party programs, although the images may not load correctly. PDFs will be available as well, although transitions and animations will not work.

## LEARNING RESOURCES

1. Margi Sirois, Laboratory Procedures for Veterinary Technicians, 7<sup>th</sup> edition, St. Louis, MO, Mosby Inc, 2019 (ISBN: 9780323595056)
2. Margi Sirois, Lab Manual for Laboratory Procedures for Veterinary Technicians, 7<sup>th</sup> edition, St. Louis, MO, Mosby Inc, 2019 (ISBN: 9780323595407)
3. Reagan, William, et al. Veterinary Hematology: Atlas of Common Domestic and Non-Domestic Species, 3<sup>rd</sup> edition, Ames, IA, Wiley-Blackwell, 2019 (ISBN-13: 978-1-119-06497-8)
4. Tsuda, Matthew and Peralta, Mindi. *ANSC 151L Notebook Spring 2024*.

## 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 Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class. Jodi Asato can be reached at (808) 235-7472, [jodiaka@hawaii.edu](mailto:jodiaka@hawaii.edu), or you may stop by Hale Kāko‘o 105 for more information.

## SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

Leslie Cabingabang, Confidential Advocate  
 Phone/Text: ((808) 348-0432 or (808) 341-4952  
 Email: [advocate@hawaii.edu](mailto:advocate@hawaii.edu)  
 Office: Hale Kāko‘o 107

Desrae Kahale, Mental Health Counselor & Confidential Resource  
 Phone: (808) 235-7393  
 Email: [dkahale3@hawaii.edu](mailto:dkahale3@hawaii.edu)  
 Office: Hale Kāko‘o 101

Mykie Ozoa-Aglubub, Title IX Coordinator  
 Phone: (808) 235-7468  
 Email: [kcho@hawaii.edu](mailto:kcho@hawaii.edu)  
 Office: Hale Kako‘o 109

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, Interim EP 1.204, go to [manoa.hawaii.edu/titleix/](https://manoa.hawaii.edu/titleix/)

## ACADEMIC INTEGRITY

Refer to Vet Tech Student Handbook for all policies regarding academic dishonesty. Actions that are involved within this policy include but are not limited to:

- Sharing answers on assignments that are not considered group assignments.
- Informing classmates of quiz and exam content.
- Viewing other classmates' papers or talking during quizzes and exams.
- Using any form of unapproved notes during a quiz or exam (paper notes, phone, smartwatch, laptop, etc.)

Please note that all suspected actions will be immediately investigated for legitimacy. This may mean receiving a zero on suspected assignments, discussion with the program director and academic affairs, and scrutinization of assignment content until all parties are proven uninvolved.

## 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: Alaka'i 121
- Phone: (808) 235-7422

Last day for 100% refund: 1/16

Last day for 50% refund: 1/31

Last day to withdraw without a W: 1/31

Last day to withdraw with a W: 3/22

W	Monday		Tuesday		Wednesday		Assignments
1	1/8	Complete UA	1/9	Complete UA	1/10	Complete UA	
2	1/15	<b>Holiday</b>	1/16	Microscopic UA	1/17	Microscopic UA	
3	1/22	Microscopic UA	1/23	Microscopic UA	1/24	Microscopic UA	<b>Quiz 1</b> – Complete UA
4	1/29	Microscopic UA	1/30	Microscopic UA	1/31	Microscopic UA	
5	2/5	Blood Smears and CBC	2/6	Blood Smears and CBC	2/7	Blood Smears and CBC	<b>Quiz 2</b> – Microscopic UA <b>Lab Manual Assignment I</b> – Unit 1 & 5
6	2/12	CBC Math, RBC Morphology	2/13	CBC Math, RBC Morphology	2/14	CBC Math, RBC Morphology	<b>Quiz 3</b> – Blood Smears and CBC
7	2/19	<b>Holiday</b>	2/20	RBC Morphology	2/21	RBC Morphology	
8	2/26	RBC Morphology, WBC Morphology	2/27	WBC Morphology	2/28	WBC Morphology	
9	3/4	Review	3/5	Review	3/6	Review	<b>Quiz 4</b> – RBC Morphology <b>Lab Manual Assignment II</b> – Unit 2 & 3
10	3/11	Practicum 1	3/12	Practicum 1	3/13	Practicum 1	<b>Practicum 1, Lab Notebook 1</b>
11	3/18	<b>SPRING BREAK</b>					
12	3/25	Fecal Floats	3/26	<b>Holiday</b>	3/27	Fecal Floats	
13	4/1	Nematodes	4/2	Fecal Floats, Nematodes	4/3	Nematodes	
14	4/8	Protozoa & Ectoparasites	4/9	Protozoa & Ectoparasites	4/10	Protozoa & Ectoparasites	<b>Quiz 5</b> – Fecal Floats and Nematodes
15	4/15	Cytology Tests	4/16	Cytology Tests	4/17	Cytology Tests	
16	4/22	Review	4/23	Review	4/24	Review	<b>Lab Manual Assignment III</b> – Unit 6 & 9
17	4/29	Review	4/30	Review	5/1	Review	
18	5/6	<b>FINALS WEEK</b> – Practicum 2					<b>Practicum 2, Lab Notebook 2</b>

Unit	Skill	Req	Lab/Lecture
1	Select and maintain laboratory equipment	Req	Hands on
1	Prepare, label, package, and store specimens for laboratory analysis	Req	Hands on
1	Understand how to ensure safety of patients, clients and staff in the collection and handling of samples	Req	
1	Prepare diagnostic specimens for shipment	Req	
2	Perform CBC: packed cell volume	Req	Hands on
2	Perform CBC: total protein	Req	Hands on
2	Perform CBC: white cell count	Req	Hands on
2	Perform CBC: red cell count	Req	Hands on
2	Perform microscopic exam of blood film: prepare film and stain using a variety of techniques	Req	Hands on
2	Perform microscopic exam of blood film: perform leukocyte differential – normal vs abnormal	Req	Hands on
2	Perform microscopic exam of blood film: evaluate erythrocyte morphology – normal vs abnormal	Req	Hands on
2	Perform microscopic exam of blood film: correct white blood cell counts for nucleated cells	Req	Hands on
2	Perform microscopic exam of blood film: estimate platelet numbers	Req	Hands on
2	Perform microscopic exam of blood film: calculate absolute values	Req	Hands on
2	Perform cytologic evaluation: prepare and stain bone marrow specimens		Hands on
2	Perform CBC: hemoglobin	Req	
2	Identify blood parasites: Anaplasma sp		
2	Calculate hematologic indices	Req	
5	Perform Urinalysis: determine physical properties	Req	Hands on
5	Perform Urinalysis: test chemical properties	Req	Hands on
5	Perform Urinalysis: examine and identify sediment	Req	Hands on
5	Identify blood parasites: Hemotropic Mycoplasma sp (Hemoplasmas) (formerly Haemobartonella sp and Eperythrozoon sp)	Req	
6	Understand and identify substances that when ingested result in toxicity: identify common poisonous plants	Req	
6	Understand and identify substances that when ingested result in toxicity: be familiar with substances (organic and inorganic) that cause toxicity	Req	
8	Perform diagnostics procedures for parasites: fecal flotations	Req	Hands on
8	Perform diagnostics procedures for parasites: direct smears	Req	Hands on
8	Perform diagnostics procedures for parasites: centrifugation with flotation	Req	Hands on
8	Identify blood parasites: Dirofilaria sp/Acanthocheilonema sp (formerly Dipetalonema sp)	Req	Hands on
8	Identify common parasitic forms: Nematodes	Req	
8	Perform parasitologic procedures for external parasites and identify: lice	Req	
8	Identify blood parasites: Babesia sp		
8	Perform coprologic tests		
8	Identify blood parasites: Ehrlichia sp		
8	Perform parasitologic procedures for external parasites and identify: ticks	Req	

8	Perform parasitologic procedures for external parasites and identify: mites	Req	
9	Perform cytologic evaluation: assist in collecting, preparing and evaluating transudate, exudate and cytologic specimens (joint, cerebrospinal, airway, body cavity)		Hands on
9	Perform cytologic evaluation: understand timing; types of pregnancy testing		Hands on
9	Perform cytologic evaluation: perform fine needle tissue aspirates and impression smear preparation (differentiate benign vs. malignant)		Hands on
9	Perform cytologic evaluation: evaluate semen		Hands on
9	Perform cytologic evaluation: collect, prepare, and evaluate ear cytology	Req	Hands on