UNIVERSITY of HAWAIʻI
WINDWARD COMMUNITY COLLEGE
Ke Kulanui Kaiāulu o ke Koʻolau

ANSC 253: Applied Pharmacology for Veterinary Technicians

Fall 2026

3 Credit Hours | CRN 62176

Wednesdays 11:00 AM - 1:30 PM

Palanakila 212

* This syllabus and course schedule is subject to change. Students will be notified in advance of any changes.*

About Windward Community College

Mission Statement

ʻO keia ka wā kūpono e hoʻonui ai ka ʻike me ka hoʻomaopopo i kō Hawaiʻi mau hoʻoilina waiwai. Aia nō hoʻi ma ke Kulanui Kaiāulu o ke Koʻolau nā papahana hou o nā ʻike ʻake akamai a me nā hana noʻeau. Me ke kuleana koʻikoʻi e hoʻohiki ke Kulanui e kākoʻo a e hoʻokumu i ala e hiki kē kōkua i ka hoʻonui ʻike a nā kānaka maoli. Na mākou nō e hoʻolako, kākoʻo a paipai i nā Koʻolau a kō Oʻahu aʻe me nā hana noʻeau ākea, ka hoʻonaʻauao ʻoihana a me ka hoʻonui ʻike ma ke kaiāulu— hōʻaʻano a e hoʻoulu i nā haumāna i ka poʻokela.

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

ʻĀina

Windward Community College is located in the ahupuaʻa of Kāneʻohe and Heʻeʻia in the moku of Koʻolaupoko on the island of Oʻahu. Both ahupuaʻa are directly connected to the moʻo ʻōlelo of Pāpa and Wākea, who are seen as the ancestors of the Hawaiian nation. The campus sits beneath the puʻu of Keahiakahoe, which is also connected to many moʻo ʻōlelo of this ʻāina. Because wind names and rain names are associated with specific ʻāina, the rain name of Kāneʻohe is known as the ʻĀpuakea and the rain name of Heʻeʻia is the Ulumano.

Instructor Information

About Your Instructor

Aloha and welcome to ANSC 253. Your instructor for this course is Jessie Krause, a small animal veterinarian who has been teaching full-time at Windward Community College since 2023. Her teaching philosophy is centered on principles of establishing a safe and supportive learning

environment, embracing the learning process, and providing quality course content with a clear and relevant purpose.

Contact Information

- **Office Hours:** Mondays 2:30-3:30 PM or by appointment
  - **Office:** ʻImiloa 102
  - **Office Phone:** 808-236-9125
- **Email:** jkrause7@hawaii.edu

Communication

- The instructor will communicate with students in person during class time, by email, or through the Announcements feature in Lamakū. Any changes in the course schedule, such as examination dates, deadlines, etc., will be announced ahead of time in Lamakū or via email.
- **It is recommended that students check their email accounts regularly (at least every 48 hours) to be informed of any changes in a timely manner.**
- It is also recommended that students set Lamakū Notifications (both email and D2L Brightspace Pulse App) to receive course notices, such as grading updates, announcements, and activity reminders.
- Course grades will be kept as current as possible in Lamakū, generally updated weekly.
- **General course questions should be posted in the Lamakū Q&A Discussion Board.**
- Any questions pertaining to an individual student's grade, or which for other reasons are preferred to be asked privately, should be sent to the instructor via email. Please use Lamakū Email instead of UH Gmail or other email.
- While Lamakū has an Instant Message feature, I prefer email. Please feel free to use Instant Message to communicate with your classmates if you like.
- When responding to email communication from the instructor or another faculty member, students are to "reply all" so that all parties are included in the response.

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: Alakaʻi 121
- Phone: (808) 235-7422

Course Format & Structure

This course is in an in-person format. It is offered over a 16-week time frame and consists of weekly in-person lectures in addition to assigned textbook reading assignments. Please note that this is not a self-paced course; the course schedule is provided in this syllabus.

- In-person lectures will occur on Thursdays from 11:00 AM - 1:30 PM in Palanakila 212.
- New content and course announcements will be released weekly before lecture.
- Assignments will generally be due the following Wednesday by 11:59 pm unless otherwise specified. All assignment due dates will be clearly stated in Lamakū.

Participation Verification

Campuses are required by federal regulations to verify the participation of students in their classes. In accordance with Executive Policy 7.209, all students in the University of Hawai'i system are required to establish "participation" to ensure that they are not dropped from their class(es). Effective Fall 2021, students who fail to participate by the late registration period for a class will be administratively dropped from that class. Students may also be dropped from dependent prerequisite and/or corequisite classes if both courses do not establish participation.

Course Information

Catalog Description

This course is designed to give students a practical knowledge of drugs used in veterinary medicine. Topics include drug classification, methods of action, calculations, administration, effects and side effects. Also includes a discussion of client education, drug safety, and federal regulations governing the purchase and storage of controlled drugs. Upon successful completion, students will be able to properly calculate, dispense, and administer medications, recognize adverse reactions and maintain pharmaceutical inventory and administrative records. This course is intended for students entering veterinary technology, veterinary assisting, or other animal-related fields.

Prerequisites: Admission into the Veterinary Technology Program and a grade of "C" or better in all completed ANSC courses.

Student Learning Outcomes

Students can expect to attain the following outcomes as a result of taking this course:

1. Recognize groups of veterinary drugs, their mechanisms and actions, and clinically relevant side effects.
2. Correctly interpret a veterinarian's pharmacy orders.
3. Accurately calculate the correct dose and dispensing quantity of medications in various dosage forms.
4. Understand the role of federal and state regulatory agencies with regards to drug approval, labeling, and prescribing as well as record-keeping and inventory management of controlled substances.
5. Accurately communicate drug information and dosing instructions to clients in order to maximize safety, compliance with prescribed therapy and successful treatment of the patient.

Course Materials & Technology

Required

Anderson, Melinda. *Clinical Pharmacology and Therapeutics for Veterinary Technicians*, 5th Ed. Elsevier, 2024. ISBN: 9780323880404

Lectures: Slide presentations will be available each week on a shared Google drive. Links to these resources will be posted weekly in Lamakū.

Other Resources: Due to the nature of this course, it is necessary to have regular access to a computer with internet, campus email, Lamakū, Google Drive, and computer software (e.g. Microsoft, Adobe).

- Windward offers free laptop and WiFi hotspot check-out to students (first-come, first-served), as well as software and other tech discounts; see Ka Piko Student Tech Support for information.
- Additional required course materials will be posted in Lamakū Content.

Recommended

- D2L Brightspace Pulse App (free download from app stores)

Lamakū Learning Management System (https://lamaku.hawaii.edu/d2l/home)

Learn about the Hawaiian meaning of the word "lamakū": Lamakū Pronunciation, Meaning, and Importance.

- UHCC Lamakū Student Resources (how-to videos)
    - Contact UH ITS for 24/7 Lamakū assistance.
- Keeping Accessibility and UDL in Mind
    - If you find any course content that needs remediation and/or updating, please kindly share and I will immediately work to make the content accessible.
- Lamakū courses will appear 5 days before the first day for the academic term and will become inactive (no longer be available to access) 3 weeks after the end of the term. Be sure to save any coursework you may need from Lamakū *during* the term.
- Lamakū automatically logs you out *if it does not detect activity for three hours*. A warning message will appear, notifying you of the lack of activity. Activity is defined as clicking a button in Lamakū, such as "Save Draft" or "Next" (in a test), clicking on a course tab, or taking an action that sends information to the server.

Policy for Technology Use in the Classroom

- Students may not use their calculators or electronic devices which have stored information to perform calculations for quizzes and exams.
- **Personal computers are to be used in class for note-taking purposes only.**
- Inappropriate use of personal electronic devices, including but not limited to computers and cell phones, during class time will result in the accumulation of 1 demerit per instance as stated in the Student Handbook. Inappropriate use of electronics in this class is defined as any purpose other than taking notes (including but not limited to: texting, checking social media accounts, "surfing" the internet).
- **The instructor reserves the right to prohibit the use of personal electronic devices during class time if these rules are not followed.**

Other Technology

D2L Brightspace, the parent company of Lamakū, recommends users choose the latest versions of Google Chrome, Mozilla Firefox, Microsoft Edge, or Apple Safari as their internet browser.

We recommend that students update their internet browser at the start of each term, search how to allow pop-up windows, adjust their cookies, and clear device history. Also, fully restart your computer and/or device from time-to-time to optimize performance.

Review the privacy/security policies before using the technologies we will be using in this class. Contact me if you would like to discuss the use of alternate options or technologies.

- Adobe Reader is used to read course files (accessibility statement, privacy policy)
- Canva is a presentation, graphic design software, and more (accessibility statement, privacy policy)
- Google Drive is UH-provided cloud storage (accessibility statement, privacy policy)
- Google Docs is used to create documents (accessibility statement, privacy policy)
- Google Sheets is used to create assignment and reference worksheets (accessibility statement, privacy policy)
- Google Slides is a presentation authoring software provided by UH (accessibility statement, privacy policy)
- H5P is used for creating review activities (accessibility, privacy policy)
- Kahoot! is used for review activities (accessibility statement, privacy policy)
- Loom may be used for screen recording (accessibility statement not provided, privacy policy)
- Padlet may be used for some of the discussion activities (Padlet Accessibility Statement, Padlet privacy policy)
- Quizlet is used for interaction (accessibility statement not provided, privacy policy)
- YouTube may be used for delivering some of the course content (accessibility statement, privacy policy)
- Zoom may be used as a virtual office (accessibility statement, privacy policy)

Course Activities & Grading Policy

Students will be graded on the following activities:

Course Activity	Points (915 Total)
Assignments	225
Quizzes	190
Exams	500

*See explanations for each course activity below.

Grading Scale

Total Points and Grade Equivalent
>/= 823 A
732-822 B
640-731 C
549-639 D
<548 F

Please note that "N" grades are not given for this course.

A total score of 70% or above is required in order to pass this course.

A minimum score of 70% is required on the final exam in order to pass this course, regardless of the student's overall course grade.

In the event that a student scores less than a 70% on the final exam, the final exam grade will become the overall course grade.

Description of Course Activities

Attendance

Attendance at weekly lectures is mandatory and defined as being present for the entire scheduled class period. Each student is allowed one unexcused absence without penalty. **Each unexcused absence beyond the one allowed will result in a deduction of 15 points from the student's overall course grade.** If a student is absent due to an emergency or is too ill to come to class, **a doctor's note or documentation must be given to the instructor within 48 hours of the missed class in order to be considered an excused absence.**

Quizzes may be given at the start of each lecture period. Students are responsible for being on time to take their quiz. No additional time will be given for quizzes nor will quizzes be administered at a later time without a documented excuse.

Lecture attendance via Zoom during an absence may be possible with instructor approval. It is the student's responsibility to contact the instructor to have this arranged.

Attendance via Zoom is **NOT** considered equivalent to attendance in person and will not be treated as such with regards to a student's attendance grade. An absence will be counted as unexcused without proper documentation even if a student attends via Zoom.

Tardiness: Arriving more than 10 minutes late may be considered an absence.

For more information on the Veterinary Technology Program attendance policy, please refer to the Student Handbook.

Assignments

An assignment will accompany most weekly modules to reinforce learning. Assignments will be provided in Lamakū, with instructions and due dates clearly stated. Completed assignments should be submitted to the corresponding item under the "Assignments" tab in Lamakū. Students are responsible for ensuring that the correct assignment is submitted to the correct space.

Quizzes

Quizzes will also accompany most weekly modules. They will be administered through Lamakū and must be taken at the campus testing center. Please see the section below titled "Activities Required at Scheduled Times Other than Class Times" for more information about scheduling quiz and exam appointments. It is the student's responsibility to schedule appointments.

Notes or other reference materials, including the internet, are prohibited from use during quizzes unless otherwise specified.

Examinations

Three examinations will be given throughout the semester. The first two exams will be worth 150 points each and will cover four chapters' worth of material. The third (final) exam will be worth 200 points. Approximately half of the questions will cover the final four chapters of the course and the remainder of the exam will be cumulative, representing content from the prior two exams.

Notes or other reference materials are not allowed for use during examinations.

Examinations will also be administered through Lamakū at the campus testing center. It is the student's responsibility to schedule appointments.

Policy Regarding Late Work

Late assignment submissions will be accepted up to 24 hours past the due date, but will be awarded only 50% of the original point value. Late assignments will not be accepted after 24 hours past the due date and time. If an assignment was missed due to an unforeseen emergency, communication must be established with the instructor within 48 hours of the missed deadline and documentation must be provided.

Quizzes and Exams will not be allowed to be taken after the due date without documentation of an excused absence/extenuating circumstance, such as illness or emergency.

No exam or quiz reattempts will be permitted.

Activities Required at Scheduled Times Other than Class Times

Students will be expected to take quizzes or exams at the campus testing center. Students will be given advance notice and are expected to schedule their own appointments.

Testing Center Information:

- Appointments are required for Testing Center use and will need to be made at least 3 days in advance.
- Appointments can be made on the Testing Center webpage (https://windward.hawaii.edu/services-for-students/testing-center/).
- The Testing Center can be reached at 808-235-7498 with any questions or for assistance in making appointments.
- ID cards are required for admission.
- Testing Center hours are M-F 8-4pm (closed on holidays).

Course Schedule

Students may check the Windward Student Notifications page on the website for canceled classes and/or school closures.

Topic Schedule

*The following schedule is subject to change.
*Details regarding assignment, quiz, and exam due dates and instructions will be announced in class and posted in Lamaku.

Week	Class Date	Topic
1	8/26	Ch. 1: Veterinary Pharmacology and the Veterinary Technician Introduction Label reading Source evaluation
2	9/2	Ch. 2: Pharmacy Procedures and Dosage Calculations
3	9/9	Ch. 3: Pharmacokinetics and Pharmacodynamics
4	9/16	Ch. 8: Review of the Nervous System Drugs Affecting the Neuro System Part 1: Analgesics, Tranquilizers, Sedatives, and Anesthetics
5	9/23	**Exam 1 (Ch. 1-3, 8)**
6	9/30	Ch. 4: Drugs Affecting the Gastrointestinal Tract
7	10/7	Ch. 5: Drugs Affecting the Cardiovascular System
8	10/14	Ch. 6: Drugs Affecting the Respiratory System
9	10/21	Ch. 7: Drugs Affecting the Endocrine System
10	10/28	Ch. 13: Antiinflammatory Drugs
11	11/4	**Exam 2 (Ch. 4-7, 13)**
12	11/11	**No Class - Veteran's Day** Ch. 11: Disinfectants and Antiseptics

13	11/18	Ch. 10: Antimicrobials
14	11/25	Ch. 9: Drugs Affecting the Neuro System Part 2 - Anticonvulsants and Behavior-Modifying Drugs
15	12/2	Ch. 12: Antiparasitics
16	12/9	Review
17	12/16-12/20	**Exam 3 – Date/Time TBA**

Important Dates:
September 1 - Last Day to Withdraw for 100% Tuition Refund
September 15 - Last Day to Withdraw without "W" grade and 50% Tuition Refund
November 2 - Last Day to Withdraw with "W" grade

Academic Integrity

In this class, academic dishonesty includes cheating on quizzes or exams, plagiarism, **and the use of generative AI** without permission from the instructor.

Cheating on Quizzes/Exams
In this course, quizzes and exams are not "open-book" and the use of notes or other course resources is prohibited unless otherwise specified.

Plagiarism and Generative AI
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. The use of generative AI to complete assignments in this class without the instructor's permission defeats the purpose of the assignment and constitutes academic dishonesty.

In this class, students who commit academic dishonesty, cheating, or plagiarism will have the following consequences:

- Students will receive a failing grade for plagiarized coursework, or for any quizzes or exam for which they are found to use prohibited materials to answer questions.
- All cases of academic dishonesty are referred to the Veterinary Technology Program Director as well as the Vice Chancellor for Student Affairs.

Windward CC Student Conduct Information

UH System Student Conduct Policy EO 7.208

Artificial Intelligence (AI)

UH Executive Policy 2.220 Artificial Intelligence

The use of generative AI applications such as ChatGPT, Bard, or Bing, in whole or in part, are not allowed to complete course materials or assignments unless individual assignment instructions state otherwise.

To protect the privacy of all students and maintain a safe learning environment, **students may not use AI-based tools** (e.g., Otter.ai, Fireflies.ai, Zoom AI Companion) **to record, transcribe, or analyze class conversations without prior instructor approval.** Unauthorized recording may violate campus policies and federal privacy laws (e.g., FERPA).

AI models are trained using a large variety of datasets and may produce results that are inaccurate, fabricated, or obsolete. AI models are unable to share the same experiences as those that performed these experiments or verified data in-person.

Your Responsibility with AI:

- ***Verification:*** You must verify the accuracy of all AI generated content. Never assume AI data is correct.
- ***Ethics & Integrity:*** You must be mindful of how AI usage can coincide with scientific ethics. Do not input sensitive data or proprietary information into AI tools. Avoid using AI in a way that will generate falsified or fabricated results.

The Windward CC Library AI Essentials Library Guide provides guidance and has helpful resources for students.

Student Kuleana

- **Students are expected to complete all examinations and course assignments on time.**
- **Students are expected to make sure that the correct and complete version of their assignments are uploaded to the correct assignment space in order to receive credit for their work.**
- It is the student's responsibility to be informed about deadlines concerning registration (e.g., last day for withdrawal).
- It is the student's responsibility to be informed of announcements made and to obtain copies of any assignments handed out while the student is absent.
- It is the student's responsibility to check their campus email account regularly and pay attention to information in class announcements.
- It is the student's responsibility to be aware of and follow all rules, policies and procedures as stated in the syllabus, the WCC Veterinary Technology Program Student Handbook, the UH Student Conduct Code, or via other written communication by the instructor. Failure to follow rules, or any UH/WCC policies, will result in demerits for such violations as provided for in the Vet Tech Student Handbook. The instructor

reserves the right to change, modify or add to rules during the semester if deemed necessary. Students will be notified in writing of any changes.

Behaviors recommended for success in this course:

- Take initiative for your own learning.
- Help other team members and classmates.
- Treat all classmates and instructors with respect and courtesy.
- Set aside adequate time to complete tasks and study the assigned material weekly.
- When applicable, do not forget to schedule appointments to take quizzes and exams at the Testing Center.
- Follow instructions.
- Ask for help or clarification when needed.

Academic and Technical Support

Academic Support

- Windward Community College Library
- Ka Piko Tutoring Services: Math Lab, Speech Lab, Writing Lab, ʻŌlelo Hawaiʻi Lab
- STAR Balance

Technical Support

- UH ITS Help Desk: email help@hawaii.edu or call (808) 956-8883 (or 1-800-558-2669) for Lamakū and most technology support. Available 24 hours a day, 7 days a week, including holidays.
- Student Tech Support: email winhelp@hawaii.edu, call (808) 235-7437, or stop by in person at Hale Laʻakea 228. Available Monday–Friday from 8:00 am–4:00 pm.
- Lamakū: Click on the Lamakū Help link in the menu bar at the top of the Lamakū homepage to fill out and submit a question and get your answer via email.
- Information Security for Students

College Policies & Support Services

Your instructor may also provide additional resources in your Lamakū course.

Basic Needs

Basic needs include food and housing, childcare, mental health, financial resources, and transportation. Student basic needs security is critical for ensuring strong academic performance, persistence and graduation, and overall student well-being. If you or someone you know is experiencing basic needs insecurity, please see the UH System Basic Needs.

Disabilities Accommodations Statement

Windward Community College's Disability Student Services Office (WCC-DSSO) is committed to providing equal access to qualified students with disabilities.

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to participate fully in this class, you are encouraged to contact the Disability Specialist Counselor, Roy Inouye, to discuss reasonable accommodations that will help you succeed in this class. The Disabilities Counselor can be reached at (808) 235-7448, wccdsso@hawaii.edu, or stop by the office (Hale Kakoʻo 106) for more information.

Financial Aid

If you are receiving financial aid and are contemplating not completing the course it is highly recommended that you contact the Financial Aid Office at (808) 934-2712 or email them at wccfao@hawaii.edu ***BEFORE*** you withdraw to discuss the impact this decision may have on your financial aid eligibility.

LGBTQ+

The University of Hawaiʻi system and Windward Community College are committed to building an inclusive community that supports and advocates for all students, staff, and faculty. We welcome all members of our campus community to our campuses: transgender, māhū, and people of all gender identities. All members of our campus community deserve a work and educational environment free from harassment or bullying based on their sexual orientation, gender identity, or expression. For more information, see the University of Hawaiʻi Commission on LGBTQ+ Equality. Windward Community College Commissioner: Scott Sutherland, scottjks@hawaii.edu

Mental Health Counseling

Mental Health and Wellness at Windward Community College provides counseling services and activities on campus to support students' life goals as well as their academic goals. Information about services can be found at WCC Mental Health & Wellness.

Student Conduct Code

Windward Community College follows the University of Hawaiʻi Code of Student Conduct which defines expected conduct for students and specifies those acts subject to University sanctions. Students should familiarize themselves with the Code of Student Conduct since, upon enrollment at Windward Community College, they have placed themselves under the policies and regulations of the University and its duly constituted bodies. The disciplinary authority is exercised through the Office of the Vice Chancellor for Student Affairs. Copies of the Student Conduct Code are available at the Office of the Vice Chancellor for Student Affairs.

TRiO Program

The Federal TRiO Programs are educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. TRiO includes six outreach and support programs targeted to serve and assist low-income, first-generation college students and students with disabilities in progressing through the academic pipeline from middle school to post-baccalaureate programs. Information about services can be found at Windward CC TRiO.

Title IX - Sex Discrimination And Gender-Based Violence Resources

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:

Desrae Kahale, UH System Confidential Advocate
Phone: (808) 235-7393
Email: advocate@hawaii.edu
Office: Hale Kākoʻo 101

Desrae Kahale, Mental Health Counselor & Confidential Resource
Phone: (808) 235-7393
Email: dkahale3@hawaii.edu
Office: Hale Kākoʻo 101

Mykie E. Menor Ozoa-Aglugub, J.D., Title IX Coordinator
Phone: (808) 235-7468
Email: mozoa@hawaii.edu
Office: Hale Kākoʻo 109

Karen Cho, Deputy Title IX Coordinator
Phone: (808) 235-7404
Email: kcho@hawaii.edu
Office: Hale ʻAlakaʻi 120

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, refer to the University's Title IX resources, and the Universityʻs Policy, EP 1.204.

UH Alerts

The UH Alert emergency notification system alerts the university community in the event of a natural, health or civil emergency. The information you provide will only be used in the event of an emergency that impacts the health and safety of the UH community or the closure of whole campuses. It will not be shared with others or used for routine UH communications or announcements. To sign up, visit UH Alerts for more information.