



Fall 2023 Course Syllabus

Math 101 (Mathematics for Veterinary Assistants and Technicians) – 3 Credits

Instructor: Navtej (Johnny) Singh || Office Location: Manaopono 110

E-Mail: navtej@hawaii.edu << This is the best way to get in touch. Provide name & class information >>

Websites: <https://laulima.hawaii.edu> << Access to everything you need for this course is here >>

Zoom Video Link: <https://hawaii.zoom.us/j/2025344398> <<Meeting ID: 202 534 4398 >>

Dedicated Office Hours: T 9am – 11am (zoom), F 10am – 12pm (in person & Zoom), & by appointment

Telephone #: (808) 236 – 9278 << If I don't answer leave a message with contact information >>

CRN	Class Meeting	Day(s)	Classroom	Mode
61041	8:30am – 9:45am	Friday	Manaopono 113	Hybrid

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 - Course Content – Course Structure

Catalog Description: An introduction to clinical calculations used in veterinary medicine. Topics include the application of mathematical skills to solve applied problems in veterinary nursing and pharmaceutical dispensing with emphasis on dosage, concentration, dilution and drip rates. Also included is mathematical and laboratory terminology. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields. Pre-Requisite(s): C or better in MATH 75X or higher or equivalent, satisfactory math placement test score, or consent of instructor.

Course Content: The course will begin with review of mathematical skills with emphasis on applications and terminology for veterinary assistants. Then core topics such as Measurements used in veterinary medicine, drug orders and medicine labels, dose calculations and syringe measurements, and calculating intravenous infusions will be covered. There will also be an emphasis on graphs and statistics in addition to calculation methods such as ratios and proportions. Furthermore, this course help prepares students for the mathematical portion of the Veterinary Technician National Examination (VTNE).

Course Structure: This is a hybrid course with mandatory weekly class meetings. To make efficient use of the class time, students are expected to watch my lesson videos, complete related homework assignments, and examine resources (links, PowerPoints, and handouts) before coming to the class. All necessary course material (video lectures, PowerPoint presentations, homework assignments, and handouts) for this course is available at <https://laulima.hawaii.edu>. During the class, initial portion of each class period will be utilized to discuss homework and clarify any questions students may have from the lesson video. This will be followed by an in-class quiz on the topic. Last part of the class will be used to discuss and go over the quiz.

Learning Resources and Materials

- **Recommend Resource Textbook 1):** Math and Dosage Calculations for Medical Careers, 5th or higher edition by Kathryn Booth. A copy of the textbook is available at WCC library for short term use.
- **Suggested Resource Textbook 2):** Medical Mathematics and Dosage Calculations for Veterinary Professionals, (Any Edition) by Robert Bill, Wiley-Blackwell Publishing, 2009. Here is a free link to free ebook: <http://wccproxy.lib.hawaii.edu:2048/login?url=http://ebookcentral.proquest.com/lib/wcc-ebooks/detail.action?docID=5596888>
- **Additional Resource Textbook 3):** Mathematics for Veterinary Medical Technicians: A Text/Workbook with Applications, (Any Edition) by Edward Stumpf, Carolina Academic Press.
- **Required Hardware:** A scientific calculator & compatible computer with reliable internet.
- **Handouts, Homework, and Other Resources:** <http://laulima.hawaii.edu>
- **Recommended Software:** Excel or similar program
- **WCC Library** (<https://library.wcc.hawaii.edu/home>) – Provides help with additional resources.

Course Level Student Learning Outcomes

Upon completion of the course, the student will be able to:

- Identify information needed for dosage calculations and perform dosage calculations.
 - Utilize appropriate techniques to solve applied problems in the veterinary profession.
 - Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.
 - Demonstrate proficiency in calculating infusion rates for fluid therapy.
- All SLOs assessments are embedded in class activities, homework, quizzes, or exams.

Tasks and Grading

Point Distribution		
Assignments	12 HW + 2 Exam Reviews @ 10 Points Each	140 pts
Consultations	Orientation and/or Consultation	010 pts
Quizzes	10 Highest Score @ 20 Points Each	200 pts
Midterm	On First Six Lessons	150 pts
Final Exam	Combination of Everything Learned in Class	200 pts
Total Points		700 pts

Letter grades will be assigned based on the following standard scale
A ⇒ 90% ↑ ; B ⇒ 80% ↑ ; C ⇒ 70% ↑ ; D ⇒ 60% ↑ ; F ⇒ below 60%;

Other grade options include N, CR, NR, I, and W. See the following information for detail:

"The 'N' grade indicates that the student has worked conscientiously, attended regularly, finished all work, fulfilled course responsibilities, and has made measurable progress. However, either the student has not achieved the minimal student learning objectives and is not yet prepared to succeed at the next level, or the student has made consistent progress in the class but is unable to complete the class due to extenuating circumstances, such as major health, personal or family emergencies." If you would like to request for N grade in this class, you must provide a formal letter of request to me no later than the time of final examination addressing how you have met the criteria for N grade. Then I will make a decision on whether or not you qualify for the N grade.

The CR/NC grades require written instructor consent. Overall score of 70% or higher is consider CR and below 70% is NC. Students must apply for CR/NC grading option at the Admissions Office by the posted deadline. If a student does not apply for CR/NC grading option at the Admissions Office by the required deadline and if s/he does not withdraw, a letter grade (A, B, C, D, F, N) will be assigned for the course.

The W grade is given only when the student officially withdraws from the course by the posted deadline.

The "I" grade is a temporary grade given at the instructor's option when a student has failed to complete a small part of a course because of circumstances beyond his or her control. The "I" grade is given by student request and must be approved by the instructor.

Basic Rubrics for Grading Multistep and Word Problems	
Full Credit	<ul style="list-style-type: none"> - Shows complete understanding of a problem's mathematical concepts and procedures - Performs algorithms correctly using appropriate notation and precise mathematical language - Gives an elaborate and effective explanation of the solution process in an organized way
Partial Credit	<ul style="list-style-type: none"> - Shows near understanding of the problem's mathematical concepts and procedures - Using appropriate notation, performs algorithms completely that may contain minor errors. - Identifies most relevant information and shows a general understanding - selects an appropriate strategy for solving the problem - Shows effective explanation and some evidence of a systematic solution process
Very Little Credit	<ul style="list-style-type: none"> - Shows some understanding of a problem's mathematical concepts and procedures - Performs algorithms that may contain major computational errors - Identifies some relevant information and shows limited understanding - Shows little evidence of a solution process or use of appropriate mathematical language - Gives some explanation of the solution process but may be vague or difficult to interpret
No Credit	<ul style="list-style-type: none"> - Shows no understanding of a problem's mathematical concepts and procedures - Identifies no relevant information, algorithmic pattern, or evidence of a solution process - Fail to explain significant parts of the problem or omit it altogether

Student's Responsibilities

Responsible students take ownership of their actions by exhibiting the following behaviors in this class:

- Take an active role in learning and set aside adequate time for doing assignments
- Maintain a positive and inquiry attitude towards learning.
- Complete assignments by the designated dates with attention to quality of work.
- Actively communicate with instructor and seek immediate help when needed.
- Be proactive and do not procrastinate since new concepts are built on previously learned material.

Growth Mindset

No one is born with Math brain. Everyone can develop skills necessary to learn Math. Mathematics helps create multiple connections in your brain, which lead to tremendous brain growth as supported by various research. I recommend you watch this short video before starting the course: <https://youtu.be/bxrPy1fjVU4>.

Assignments

All assignments (homework and exam reviews) are available through laulima.hawaii.edu under assignments tab. Note that all homework assignments are worth equal credit. Each homework assignment must be completed on a separate sheet of paper and should be turned in at the beginning of the class after we go over the homework (refer to the schedule page of the syllabus for due dates). Late assignment can only be accepted for half credit. Your assignments will be graded based on neatness, competition, correctness, and organization.

Quizzes

There will be 12 in-class quizzes (one per lesson) during the semester. Your highest 10 quizzes will be used for grading. This will allow you to drop the lowest scores or replace a missed quiz. Primary purpose of these quizzes is for you to find out what you know and what need some work before a major exam.

Exams

There will be two written exams, a midterm and a cumulative final, in this class. Best way to prepare for the exams is to study lecture videos, homework, and handouts. A review sheet will be provided before each exam to further assist you in studying for the exam. All exams must be taken in proctored environment without any references unless stipulated by the instructor. **There is no make up for the midterm or the final exam.**

Math Help Outside of Class

In addition to reaching out to me for help I encourage you to utilize the following free resources:

- [Ka Piko Center](#) - Provides online tutoring via WCC Math Lab
- <http://www.hawaii.edu/tutor> – Provides 24/7 online tutoring (use your UH credentials to login).
- <http://www.khanacademy.org> – Provides tutorial videos with interactive feedback on selected topics

Communication

The following methods will be used to communicate with me outside of the class:

- E-mail will be our primarily mode of communication (make sure to check your UH email frequently). I will do my best to response to your emails within 24 hours on instructional days (perhaps much sooner). This is an effective method of communication if you expect a short response.
- You can connect with me via Zoom Video using the ID 202 534 4398 or via Google Video using the UH ID navej@hawaii.edu during dedicated office hours (or via an appointment) to get elaborative help.
- You can stop by office anytime during my in-person office hours or make an appointment.
- Alternatively, you can also call my office phone (808) 236 – 9278 during my in-person office hours or leave a message for me to return your call.

Foundations Quantitative Reasoning Hallmarks

Math 101 fulfills 3 credits of the General Education requirements for both an A.A. degree at WCC and a Bachelor's degree at 4 year UH institutions. Consequently, it meets the hallmarks of the quantitative reasoning requirement. This course will:

1. provide students with theoretical justifications for, and limitations of, mathematical or statistical methods, and the formulas, tools, or approaches used in the course.
2. include application of abstract or theoretical ideas and information to the solution of practical quantitative reasoning problems arising in pure and applied research in specific disciplines, professional settings, and/or daily and civic life.
3. provide opportunities for practice and feedback that are designed to help students evaluate and improve quantitative reasoning skills by including a course component at least once per week with a maximum 30:1 student-to-teacher ratio.
4. be designed so that students will be able to
 - a. identify and convert relevant quantitative information into various forms such as equations, graphs, diagrams, tables, and/or words;
 - b. select appropriate techniques or formulas, and articulate and evaluate assumptions of the selected approaches;
 - c. apply mathematical tools and perform calculations (including correct manipulation of formulas);
 - d. make judgments, create logical arguments, and/or draw appropriate conclusions based on the quantitative analysis of data, the assumptions made, the limitations of the analysis, and/or the reasonableness of results; and
 - e. effectively communicate those results in a variety of appropriate formats.

Disabilities Accommodation

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. You can reach Roy Inouye (located in Hale Kako'o 106), Interim Disabilities Counselor, at (808) 235-7448 or at royinouye@hawaii.edu.

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:

UH Confidential Advocate
Phone: (808) 348-0663
Email: advocate@hawaii.edu

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

Karen Cho, Title IX Coordinator
Phone: (808) 235-7474
Email: kcho@hawaii.edu
Office: Hale Kāko'o 128

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/

Academic Dishonesty

Plagiarism and use of another's work without proper acknowledgment is not permitted. A student caught cheating, may receive a failing grade for the course. All students are required to follow the Student Conduct Policies described at http://www.wcc.hawaii.edu/Policies/5_3_Student_Conduct.php.

Remarks

Please check your WCC e-mail account frequently for important announcements. Note that this syllabus is subject to change in extenuating circumstances. When communicating via e-mail or leaving voice message for me, please include your name, course and contact information so that I can easily identify you and get back to you in a timely manner. Make up work will only be allowed upon showing proof of excused absence. For additional academic information, refer to WCC website www.windward.hawaii.edu or go to www.hawaii.edu for system wide 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 (located in Alakai 121) at (808) 235-7422 or email wccaa@hawaii.edu. If you stop attending this class for any reason, it is your responsibility to drop it.

Math 101 Fall 2023 Tentative Schedule		
Week	Dates (F)	Assignments and Quizzes Lesson Topics
1	8/25	Orientation - Go Over Course Syllabus and Get Started with the Course
2	9/1	Lesson 1 Arithmetic Review
3*	9/8	Lesson 2: Ratio, Proportions, and Linear Equation
4^	9/15	Lesson 3: Measurement Systems
5	9/22	Lesson 4: Unit Conversation
6	9/29	Lesson 5: Statistics
7	10/6	Lesson 6: Graphs
8	10/13	Midterm Review (Midterm Due at the Testing Center Between 11/13 – 11/17)
9	10/20	Lesson 7: Equipment for Dosage Measurement and Roman Numerals
10	10/27	Lesson 8: Dosage Calculations
11	11/3	Lesson 9: Oral and Parenteral Dosages
12*	11/10	Lesson 10: Intravenous Calculations
13	11/17	Lesson 11: IV Fluid Needs
14*	11/24	No Class (Thanksgiving Break)
15	12/1	Lesson 12: Calculations for Compounding
16	12/8	Final Exam Review (Non-Instructional Day)
17	12/11 –14	Final Exam Due at the Testing Center Between 12/8 – 12/14

^Drop Dates:

September 12, 2023 – Last day to withdraw without a W grade

*Holidays:

September 4, 2023 – Labor Day

November 7, 2023 – Election Day

November 10, 2023 – Veterans' Day

November 23-24, 2023 – Thanksgiving Break