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VETT 311-001 Pharmaceutical Calculations for Veterinary Technicians

CRN 81157

COURSE SYLLABUS: Fall 2025
Hybrid with online and face to face
Thursdays 3-450p

INSTRUCTOR INFORMATION

Instructor: **Marisa Rhyne, MAg, MS, BAS, LVT, VTS (ECC, SAIM)**
Office Hours: **by appointment only**
University Email Address: **Marisa.Rhyne@tamuc.edu**
Preferred Form of Communication: **email**
Communication Response Time: **24 hours**

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s)

- **Required:**
 - Practical Math for Veterinary Technicians with TopHat use
 - By Marianne Tear & Susan Burcham
 - Publisher: Blue Door Publishing
 - ISBN 978-1-64386-264-4

Software Required: Any Internet vehicle including Google Chrome, Firefox, etc that follows that below supported browsers. Also, lecture materials, supplemental worksheets, videos, and slides will be available on D2L which will need to be opened using Adobe PDF, Microsoft Word, and Microsoft Power Point.

Optional Texts and/or Materials: There will be links to images, videos, and other supplemental materials.

Course Description

The syllabus/schedule are subject to change.



This course is designed to present the broad spectrum of information commonly referred to as posology, which is defined as the study of dose and dosage in the field of applied pharmacology.

This course will include, but not be limited to:

elementary algebra

general mathematics used by veterinary medical personnel involved in:

calculating dosages on common drugs

reading drug orders and labels

intravenous flow rates

systems of measure

drug orders

dose calculations to other calculations

The goal of this course is that each student be confident and capable of calculating correct drug doses regardless of the physical form of the medication. This course requires a strong background in algebra, the metric system, and an understanding of word problems.

Prerequisites: Current enrollment in the second year of the professional Veterinary Biomedical Technology program.

Student Learning Outcomes

1. Students will demonstrate the ability to perform pharmaceutical conversions as needed to include weight conversions, dosage conversions, and dose conversions.
2. Students will be able to identify the needed patient and medication information to correctly perform pharmaceutical calculations.
3. Students will effectively be able to calculate the dose needed for a prescription provided by the DVM.
4. Students will be able to appropriately dispense medication as calculated in any form (oral liquid, tablets, injectables, etc) into the appropriate dispensing vessel (pill vial, syringe, liquid bottle dispenser).
5. Students will adhere to proper handling techniques of medication when dispensing and administering.
6. Students will be guides for clients on medication administration for their pet(s).

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COURSE REQUIREMENTS

Minimal Technical Skills Needed

Examples include: Using the learning management system, using Microsoft Word and PowerPoint, using presentation and graphics programs, use of a simple calculator, etc

Instructional Methods

This section describes how the learning process will be conducted (delivery modalities, course structure, Getting Started and types of learning activities and assessments). This course is the lab companion to Pharmacology lecture course which will be taken in the Spring. This lab course will be delivered face-to-face with use of TopHat for Practical Math for Veterinary Technicians to complete homework assignments.

Student Responsibilities or Tips for Success in the Course

Examples include: Regularly logging into the course website, approximately 2 hours of weekly study and 2 hours of participation time expected. These anticipated times are an estimation and may require more or less.

GRADING

The final grade in the course will be based on your accumulated total points during the semester according to the following distribution:

A = 450 - 500 Points

B = 400 - 449 Points

C = 350 - 399 Points

D = 300 - 349 Points

F = 299 & below

Course grades come from:

10 Homework assignments @ 20 points each	200 points
1 lab midterm exam @ 100 points	100 points
Classroom participation (total of 13 classes)	50 points
1 team project (parenteral admin, enteral admin, topical admin, Fluid calc & fluid setup, basic calculation, CRI, Ax calc)	50 points
1 lab final exam @ 100 points	100 points

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TOTAL	500 points
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1. Attendance

- You are expected to come to class every meeting.
- Classroom participation is part of your grade (50 points). It includes your attendance and participation in class.
- Excessive absences will result in a deduction of overall course points.
- Excused absences must be discussed with the instructor within 48 hours of a missed class, preferably before.

2. Assignments

- Homework assignments are to be completed in TopHat
- Late submissions: Submissions will be due at a specified date and time. Any time after the due date, the homework is considered late and will receive an automatic 10% reduction in the final score and a 1-point reduction each day beyond the due date.

Assessments

The lab exams will consist of a midterm and final, both with written and practical portions. The final will be comprehensive/cumulative and will be given during lab time the week of 12/9, unless otherwise scheduled.

Assignments & Activities

Class participation will be completed during class time with board examples and hands-on medication filling activities, unless otherwise specified. Homework assignments will be due at the end of the week in which the material was presented. Please see the late submission policy above for how late submissions will be handled. The assignments will be related to material, enforcing the content being presented at the time.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

The syllabus/schedule are subject to change.



https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact the Instructor. If you contact me by email Monday-Thursday, you can expect to hear from within 24 hours. Emails sent Friday after 3p through Sunday evening may not be receive a response until Monday.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

The syllabus/schedule are subject to change.



University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:

<https://www.britannica.com/topic/netiquette>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

[Undergraduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

[Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

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Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

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Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

COURSE OUTLINE / CALENDAR

Pharmaceutical Calculations tentative schedule:

Week	Lab
1 (8/26)	Course introduction, chapter 1 Metric System & Chapter 2 Body weights
2 (9/2)	Chapter 3 Standard Conversions & Chapter 4 Non-standard Conversions
3 (9/9)	Review 1-4/case examples (lab – liquid and tablet vials, syringes/needles)
4 (9/16)	Chapter 5 Dose and Dosage Calculations (lab – rx fill)
5 (9/23)	Chapter 6 Advanced Dosage Calculations (lab – rx fill)
6 (9/30)	Chapter 6 Advanced Dosage Calculations (lab – rx fill)
7 (10/7)	Review 5 & 6/case examples, prep for Midterm
8 (10/14)	Midterm
9 (10/21)	Chapter 7 Fluid Calculations (lab – fluid bag sizes, drip sets)
10 (10/28)	Chapter 7 Fluid Calculations (lab - fluid bag setup)
11 (11/4)	Chapter 8 Anesthesia Calculations
12 (11/11)	Chapter 9 CRI Calculations (lab – CRI for bags)
13 (11/18)	Chapter 9 CRI Calculations (lab – CRI for syringes)
14 (11/25)	Thanksgiving week – NO class
15 (12/2)	Review 7-9/case examples, prep for final
16 (12/9)	Final

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