V T 53B: MEDICAL CALCULATIONS FOR VETERINARY NURSES

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2025
Units:	2
Hours:	2 lecture per week (24 total per quarter)
Advisory:	Not open to students with credit in APAV 53B.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- Demonstrate the knowledge and ability required to quickly and accurately calculate common drug dose calculations.
- Demonstrate the knowledge and ability required to quickly and accurately calculate common intravenous fluid dose and infusion rate calculations.

Description

Building on foundational mathematics knowledge and skills for application in veterinary settings. Review of calculations involving fractions, decimals, ratios and proportions, unit conversions, and algebraic equations. Clinical medical calculations utilized in preparation and administration of drugs, dosage determinations, intravenous fluid infusion, and prescription dispensing. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

Course Objectives

The student will be able to:

1. Perform common calculations used within the veterinary field.
2. Perform conversions including imperial and metric systems, ratios, proportions, and decimals.
3. Interpret and prepare medication labels involving capsule and tablet strength, dosages, and oral solution concentrations.

Course Content

1. Common calculations
    a. Dosage calculations
    b. Fluid calculations
    c. Energy requirements
    d. Constant rate infusions
    e. Blood donation
    f. Milliequivalent problems
    g. Reconstitution of powdered drugs
    h. Dilution and solutions
2. Mathematical conversions
    a. Conversions between decimals, fractions, ratios, and percents
    b. Conversions within the metric system
    c. Conversion within the imperial system
    d. Conversions between imperial and metric systems
3. Medication labels
    a. Doctors' orders and prepare prescription labels
    b. Appropriate volumes using a variety of syringe sizes

Lab Content

Not applicable.

Special Facilities and/or Equipment

1. Classroom with multimedia capabilities.
2. Various example drug products and dosage forms for demonstration.
3. Fluid infusion equipment.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Assessments
Regular homework assignments

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture
Discussion
Cooperative learning exercises
Demonstration, both in-person and video

Representative Text(s) and Other Materials

No course materials.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

1. Worksheets
2. Reviewing demonstration videos

Discipline(s)

Registered Veterinary Technician