

## Course Number and Title: VET 140 Pharmacology for Veterinary Technicians

**Campus Location:**

Georgetown

**Effective Date:**

2022-51

**Prerequisite:**

VET 110, VET 130, VET 205, SSC 100 or concurrent

**Co-Requisites:**

none

**Course Credits and Hours:**

3.00 credits

2.00 lecture hours/week

4.00 lab hours/week

**Course Description:**

This course examines veterinary drugs and medicines. Topics include classes and actions of drugs, pharmacokinetics, pharmacy maintenance and record keeping, and drug dispensing laws and procedures. The laboratory provides opportunities to obtain drug information and calculate drug doses of common medications used in veterinary medicine.

**Required Text(s):**

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

**Additional Materials:**

Calculator, Lab Coat

**Schedule Type:**

Classroom Course

**Disclaimer:**

None

**Core Course Performance Objectives (CCPOs):**

1. Describe and compare the different classes of drugs, including indications, side effects, contraindications, and dosage forms. (CCC 5; PGC 1)
2. Calculate the dose of oral, parenteral, and injectable drugs and solutions. (CCC 2; PGC 1)
3. Describe the role of the veterinary technician in the pharmacy, including maintenance, recordkeeping, and dispensing of drugs. (CCC 1, 2, 3, 4; PGC 3)
4. Research common drugs used in veterinary medicine and identify pharmacokinetic parameters, including half-life ( $t_{1/2}$ ), clearance, withdrawal time, bioavailability, and lethal and/or toxic dose, using a variety of printed and online formularies. (CCC 2, 5, 6; PGC 1)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

## Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Describe and compare the difference classes of drugs, including indications, side effects, contraindications, and dosage forms.
  1. Identify common drugs used to treat neurological diseases/disorders in animals.
  2. Recognize common drugs used to treat cardiovascular diseases/disorders in animals.
  3. Identify common drugs used to treat respiratory diseases/disorders in animals.
  4. Describe common drugs used to treat reproductive diseases/disorders in animals.
  5. Classify common drugs used to treat gastrointestinal diseases/disorders in animals.
  6. Identify common drugs used to treat urinary diseases/disorders in animals.
  7. Categorize common drugs used to treat ocular diseases and otitis in animals.
  8. Recognize common drugs and drug protocols in the treatment of common cancers in animals.
  9. Compare and contrast the mechanism of action, indications, side effects, and contraindications of steroidal and non-steroidal (NSAIDs) usage.
  10. Compare and contrast the mechanism of action, indications, side effects, and contraindications of common antibiotics, antifungal, and antiviral drugs used to treat disease in animals.
  11. Classify common antibiotics, antifungals, and antiviral drugs used to treat disease in animals.
2. Calculate the dose of oral, parenteral, and injectable drugs and solutions.
  1. Convert an animal's weight from kilogram to pound and pound to kilogram.
  2. Research the recommended dose and dosage form available using a wide variety of sources, including printed and online formularies.
  3. Calculate the dose of different drug forms (e.g., tablet, capsule, liquid, or injectable) based on an animal's weight and/or body surface area.
  4. Record information regarding drug administration in a patient's medical record.
  5. Write a drug label that includes all the required information.
3. Describe the role of the veterinary technician in the pharmacy, including maintenance, recordkeeping, and dispensing of drugs.
  1. Describe the protocols for safe drug handling, storage, and disposal.
  2. Discuss the limitations of the veterinary technician in prescription writing, drug handling, and drug administration.
  3. Record information regarding drug administration in a patient's medical record.
  4. Communicate effectively with the veterinarian and client regarding pharmacological orders and drug administration.
  5. Compare and contrast the terms "labeled," "extra-label," and "off-label" as they refer to drug use.
  6. Define the requirements in establishing extra-label drug use (ELDU) as they apply to liability.
  7. Define *withdrawal time* as it applies to food, animal medicine, and public health.
4. Research common drugs used in veterinary medicine and identify pharmacokinetic parameters, including half-life ( $t_{1/2}$ ), clearance, withdrawal time, bioavailability, and lethal and/or toxic dose, using a variety of printed and online formularies.
  1. Identify pharmacokinetic parameters of a variety of drugs used in veterinary medicine using a variety of printed and on-line sources.
  2. Graph the bioavailability of a drug over time using  $t_{1/2}$  and loading dose.
  3. Define the terms *lethal*, *toxic*, *sub-therapeutic*, and *therapeutic dose*.

## Evaluation Criteria/Policies:

The grade will be determined using the Delaware Tech grading system:

90	-	100	=	A
80	-	89	=	B
70	-	79	=	C
0	-	69	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

## Final Course Grade:

Calculated using the following weighted average

Evaluation Measure	Percentage of final grade
Summative: Lecture Examinations	45%
Summative: Laboratory Practicals	20%
Formative: Laboratory Assignments	15%
Formative: Nutraceutical Project	10%
Formative: Lecture/Laboratory Quizzes	10%
TOTAL	100%

## Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

**Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):**

1. Apply theoretical information that leads to appropriate action in the application or delivery of veterinary nursing procedures.
2. Competently perform a full range of veterinary nursing procedures used in small and large animal medicine.
3. Practice behaviors that are consistent with the Veterinary Technology Code of Ethics and employer expectations/requirements.

**Disabilities Support Statement:**

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.