

# V T 85: VETERINARY EMERGENCY & CRITICAL CARE

## Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2023
Units:	4
Hours:	3 lecture, 3 laboratory per week (72 total per quarter)
Prerequisite:	V T 61.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable

## Student Learning Outcomes

- Recognize and articulate the common history and clinical signs of common veterinary emergency conditions.
- Quickly and competently assess an emergency/critical care patient and perform effective triage.
- Choose from among a set of relevant sample case studies, review the clinical case and develop a written Nursing Care Plan for the patient.
- Describe the effects of shock and discuss the pathophysiology of different types of shock in the veterinary patient.

## Description

Theoretical and practical aspects of assisting the veterinarian in the management of medical and traumatic emergencies, with an emphasis on comprehensive nursing of critical patients. Recognition and assessment of cardiovascular shock, respiratory crisis, gastrointestinal emergency, and musculoskeletal trauma. Principles and techniques of fluid therapy and administration of emergency drugs. Application of treatment protocols for shock, cardiopulmonary arrest, gastrointestinal crisis, wounds and fractures, toxicoses, and various common emergencies. Explanation of the maintenance of emergency medical equipment and supplies. 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:

- Discuss the role of the veterinary technician in the care of emergency patients, including: initial patient assessment, application of diagnostic and therapeutic techniques, monitoring, and care and maintenance of emergency equipment
- Describe the physiological mechanisms and effects of shock, and discuss the rationale treatment
- List ways to recognize cardiopulmonary arrest and demonstrate techniques for cardiopulmonary resuscitation

- Describe the pharmacological actions, indications, and methods of administration of various common emergency drugs
- Demonstrate a problem-oriented approach to critical care nursing
- Explain the recognition and treatment of respiratory emergencies
- Explain the recognition and treatment of cardiovascular emergencies
- Discuss appropriate interventions and management of toxicities
- Discuss the recognition and treatment of gastrointestinal emergencies
- Discuss neurological emergencies
- Create a rational approach to the acute trauma patient

## Course Content

- Role of the veterinary technician in emergency situations
  - Nature of veterinary emergencies and common examples
  - Initial patient assessment and recognition of emergencies
  - Monitoring of patient condition during and after treatment
  - Maintenance of medical records
  - Physical examination of the emergency patient
    - The art of triage: assessment and prioritization
    - Speaking with clients: phone and in-person triage
    - Primary and secondary survey of patient
  - Care and maintenance of emergency equipment and supplies
- Shock in the veterinary patient
  - Clinical signs, assessment, triage
  - Causes of and classification of shock
  - Physiological mechanisms and consequences of shock
  - Treatment techniques: stabilization
- Cardiopulmonary arrest and resuscitation
  - Recognition and initial steps
  - Basic life support
  - Advanced life support
  - Post-resuscitation care and monitoring
- Emergency drugs
  - Drugs used in basic and advanced life support
  - Antidotes and reversal agents
- Nursing the critical patient
  - Fluid support
    - Specific fluid and electrolyte imbalances
  - Nutritional support
  - Dynamic monitoring and the "Rule of 20"
  - Oxygen therapy
  - Analgesia and the critical patient
- Respiratory emergencies
  - Clinical signs, assessment, triage
  - Oxygen therapy and assisted ventilation
  - Treatment of specific respiratory emergencies
  - Thoracocentesis, nasal catheters, and chest drains
  - Care of tracheostomy tubes, nasal catheters, and chest tubes
- Cardiovascular emergencies
  - Rationale approach to cardiovascular emergencies
  - Recognition and treatment of common critical cardiac arrhythmias
- Toxins

- a. Clinical signs, assessment, triage
- b. Treatment of common toxins
- c. Venomous insects and animals
9. Gastrointestinal emergencies
  - a. Clinical signs, assessment, triage
  - b. Treatment of specific gastrointestinal emergencies
10. Neurologic emergencies
  - a. Clinical signs, assessment, triage
  - b. Treatment of specific neurologic emergencies
11. Acute trauma
  - a. Clinical signs, assessment, triage
  - b. Rational approach to trauma
  - c. Nursing assessments and interventions
12. Emergency clinic shift activity
  - a. Two shifts, four hours each
  - b. Case report

## Lab Content

1. Basic aspects of emergency medicine
  - a. Patient assessment
  - b. Triage
  - c. Airway access
  - d. CPR (Recover Initiative)
  - e. Place orogastric tube in canine
2. Basic aspects of critical care
  - a. Monitoring
  - b. Fluid therapy
  - c. Blood products
  - d. Nutritional support

## Special Facilities and/or Equipment

1. Laboratory equipped with anesthetic machine, cardiac and blood pressure monitors, infusion pumps, ECG machine, AMBU bag, mechanical ventilator, various catheters, bandaging material and splints, canine and feline resuscitation models, blood typing supplies.
2. Crash cart with current drugs.
3. Endotracheal tubes.
4. Mock pharmacy with expired drugs.
5. Intubation model.
6. Orogastric tubes and live dogs for laboratory demonstration.

## Method(s) of Evaluation

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

Written examinations

Written emergency case report

Observation of proficiency in performance of techniques in laboratory setting, which may include role play scenarios

Written short answer assignments

Student will demonstrate proficiency in performance of emergency skills as defined by the American Veterinary Medical Association Committee on Veterinary Technician Education and Activities

## Method(s) of Instruction

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

Lecture

Discussion

Cooperative learning exercises

Role play

Independent study

Laboratory

## Representative Text(s) and Other Materials

Battaglia, Andrea M., and Andrea M. Steele. Small Animal Emergency and Critical Care for Veterinary Technicians. 2021.

RECOVER Guidelines: <https://recoverinitiative.org/cpr-guidelines/current-recover-guideline/>

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

1. Weekly reading assignments from text, class handouts, and outside sources ranging from 30-60 pages per week
2. Written short answer assignments
3. Calculate fluid therapy requirements for critical patients
4. Written case study
5. Eight hours of off-site observation of an emergency clinic and a follow-up report of cases witnessed

## Discipline(s)

Registered Veterinary Technician