



**M:** Course Objectives / Learning Outcomes

Upon completion of this course students will be able to:

1. Understand the function of both large and small animal inhalant anaesthetic machines
2. Operate an inhalant anaesthetic machine for the delivery of general anaesthesia to companion and food animals.
3. Understand the basic pharmacology of drugs used in implementation of local anaesthesia, sedation and inhalant anaesthesia.
4. Calculate sedative and anaesthetic drug dosages for an individual animal.
5. Have a working knowledge of the routes of anaesthesia drug administration used in veterinary medicine.
6. Monitor the depth of anaesthesia.
7. Use the following anaesthetic monitoring devices to detect anaesthesia related problems:
  - Esophageal stethoscope
  - Doppler blood pressure monitor
  - Oscillometric blood pressure monitor
8. Intubate companion and food animal species
9. Understand the function of compressed gas delivery systems associated with the inhalant anaesthesia machine
10. Understand the occupational hazards associated with workplace exposure to anaesthetic drugs.
11. Intervene during anaesthesia emergency situations
12. Exhibit a working knowledge of anaesthesia emergency drugs

**N:** Course Content:

The major topics in the course include:

- 1. The anaesthesia machine and its component parts:**
  - Compressed gas systems
  - Scavenging/waste gas evacuation
  - Breathing circuits
  - Circle breathing system
  - Reservoir bags
  - Carbon dioxide absorbent granules
  - Endotracheal tubes
- 2. Patient assessment in preparation for anaesthesia:**
  - Physical and temperament evaluation
  - Pre-anaesthesia tests
- 3. Anaesthesia premedication:**
  - Sedatives
  - Tranquilizers
  - Analgesic drugs
  - Sedative reversal agents
  - Anticholinergic agents

4. **Anaesthesia induction:**
  - Induction techniques- mask induction
  - Induction techniques-tank induction
  - Induction techniques- injectable
  - Injectable anaesthetic induction drugs
  - Endotracheal intubation
  
5. **Anaesthesia Maintenance:**
  - Inhalant anaesthesia maintenance
  - Injectable anaesthesia maintenance
  
6. **Anaesthesia Support:**
  - The concept of controlled poisoning
  - Fluid therapy
  - Heat supplementation
  - Ocular protection
  - Assisted breathing
  
7. **Anaesthesia Monitoring Techniques:**
  - Cardiovascular monitoring
  - Respiratory monitoring
  - Species specific monitoring priorities

**O:** Methods of Instruction

This course includes 3 hours of classroom instruction as well as 2 hours of laboratory activity per week.

**P:** Textbooks and Materials to be Purchased by Students

1. Lake, T. *Dosage Calculation for Veterinary Nurses and Technicians*. 2005. Butterworth-Heinemann Publishing. (required).
2. McCurnin, D.M. & Bassert, J.M., 2006. *Clinical Textbook for Veterinary Technicians*. 6<sup>th</sup> ed., Elsevier (required).
3. Wanamaker, BP & Massey, K.L., 2004. *Applied Pharmacology for the Veterinary Technician 3*. 3<sup>rd</sup> ed., Saunders-Elsevier (required).
4. Romich, J.A., 2005. *Fundamentals of Pharmacology for Veterinary Technicians*. Thomson Delmar Learning. (recommended)
5. McKelvey D., Hollingshead, W.K. *Veterinary Anaesthesia and Analgesia*. Elsevier Press. Current edition

**Q:** Means of Assessment

Quizzes	20-30%
Assignments	15-35
Attendance & Participation	10
Final Exam	<u>20-35</u>
	100%

**Grades:** A+ 95-100, A 90-94, A- 85-89, B+ 80-84, B 75-79, B- 70-74,  
C+ 65-69, C 60-64, C- 55-59, P 50-54, F 0-49.

**R:** Prior Learning Assessment and Recognition: specify whether course is open for PLAR

**No**

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Course Designer(s)

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Education Council / Curriculum Committee Representative

Dr. Sandy Vanderburgh

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Dean / Director

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Registrar