

VS105
Surgery I

3 Credits

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Created: 07/01/2014

Revised: 08/28/2020

Approval: 08/28/2020

Alternate Delivery: Yes

The Implementation Date for this Outline is 01/09/2020

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VS105 Version: 6



Surgery I

Calendar Description

Surgical preparation is a vital part of every veterinary hospital. In this course, emphasis is placed on equipment operation and maintenance, instrument identification and care as well as the maintenance of the surgical suite to ensure a sterile environment is maintained. Patient care in conjunction with the protocols required to clip and scrub the animal for surgery is also covered.

Rationale

This course is required for first year Animal Health Technology students, and provides the foundation for further study in second semester. Surgical preparation is a crucial component of the skill set required of an Animal Health Technologist in a Veterinary setting. The course covers the theory and allows hands on experience for the student to build these skills.

Prerequisites

None

Co-Requisites

None

Course Learning Outcomes

Upon successful completion of this course, students will be able to

1. identify common surgical instruments as well as their uses and care.
2. prepare a surgical pack and properly wrap it for autoclaving.
3. fold and wrap surgical gowns and drapes for sterilization.
4. explain the function of an autoclave and indicators to ensure it is functioning properly.
5. describe the purpose of properly scrubbing, gowning and gloving for a surgical procedure.
6. follow protocol for aseptic technique.
7. demonstrate areas of patient preparation including clipping landmarks and surgical scrub techniques.
8. identify the important parameters to monitor post surgically.

9. identify complications that may occur after surgery in both large and small animals.
10. explain the basic function of an anesthetic machine and its circuits.
11. explain the functions of different suture material, needles, and suture patterns.
12. demonstrate the use of the tattoo pencil and cleaning of the machine.
13. demonstrate the application of a microchip and explain the importance in identification of an animal.
14. demonstrate the care and maintenance of electric clippers.
15. demonstrate the proper technique of endotracheal intubation in the dog and cat.
16. demonstrate the proper use of equipment used to monitor vitals and reflexes in an anesthetized patient.
17. demonstrate the proper set up and use of IV fluid pumps.

Resource Materials

Required Text(s):

None

Reference Text(s):

Tear, M. (2017). *Small animal surgical nursing* (3rd ed.). St. Louis, MO: Elsevier Health Sciences. http://www.library.ualberta.ca/permalink/opac/7646378/LAKELND_LLWEB.

Sirois, M. (2017). *Principles and practice of veterinary technology* (4th ed.). St. Louis, Missouri: Elsevier.

Thomas, J. and Lerche, P. (2017). *Anesthesia and Analgesia for Veterinary Technicians* (5th ed.). St. Louis, Missouri, Elsevier.

Conduct of Course

This is a lecture and lab course. The lecture portion of the course covers the theory and explains the techniques that will be used. The lab allows the students to put into practice the skills that have been taught.

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Evaluation Procedures

Lecture Portion:

Quizzes and Assignments	20%
Surgery midterm	20%
Surgery final lecture exam	25%

Lab Portion:

Surgery labs and exam	35%
Clinical competencies	Pass/Fail
Total	100%

Clinical competencies are evaluated at the end of the semester on a pass/fail basis. Successful completion of the competencies is required to pass the course.

Grade Equivalents and Course Pass Requirements

Letter	F	D	D+	C-	C	C+	B-	B	B+	A-	A	A+
Percent Range	0-49	50-52	53-56	57-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-100
Points	0.00	1.00	1.30	1.70	2.00	2.30	2.70	3.00	3.30	3.70	4.00	4.0

Students must successfully pass or complete the lecture portion of the course with a 60% (C), and the lab portion with a 70% (B-). A mark in the lecture portion of 50-59% is recorded as a ‘D’. A mark of 50-69% in the lab portion is recorded as a ‘D’.

A minimum grade of C (60%) in the lecture and a B- (70%) in the lab portion is required in this course to progress to VS108 Anesthesia and Analgesia.

Attendance

Classroom and laboratory attendance is considered vital to the learning process and as significant to the students' evaluation as examinations and reports, therefore absenteeism is recorded.

- a. Students having a combination of excused and/or unexcused absence of 20 percent or higher for the scheduled course hours can be required to withdraw and would then automatically receive a "RW" (required withdrawal) for the course, regardless of any other evaluation results. (RW is a failing grade).
- b. An excused absence is one that is verified with your instructor. Verification should be prior to the absence or the next class day following the absence. Verification of the absence may take the form of a note from your doctor/College nurse regarding illness, or a note from another instructor regarding a field trip or other activity, or authorization by your instructor following an in-person meeting. Be sure to contact your instructor and ask what they will require from you as verification for each absence. An unexcused absence is anything NOT verified by the instructor prior to the absence or the next class day following the absence.

NOTE: Any exceptions to the above attendance policy (e.g. timetable conflicts, work-related issues) must be approved in writing by the Department Chair prior to the beginning of the course.

It is the students' responsibility to know their own absentee record.

Normal hours are 8:30 a.m. to 6:30 p.m., with potential for evening courses, exams or extended field trips. Students are expected to be available for classes during these times.

Course Units/Topics

- Unit 1 - Sterilization and Asepsis in the surgery suite
- a) Autoclave - use, care, parameters, loading requirements and indicators
 - b) Maintaining disinfection and sterilization
- Unit 2 - Instruments
- a) Cutting
 - b) Forceps
 - c) Clamps
 - d) Needle holders/drivers
 - e) Retractors
 - f) Orthopedic instruments
 - g) Ophthalmic instruments

Instrument cleaning and maintenance procedures

Other Equipment:

Suction

Electrocautery

- Unit 3 - Surgical Packs
- a) Preparing a surgery pack
 - b) Folding and wrapping surgical drapes
 - c) Folding and wrapping surgical gowns
 - d) Preoperative preparation for surgery
- Unit 4 - Surgical Procedures commonly performed
- a) Arthroscopy and Laparoscopy
 - b) Preventing Hypothermia
 - c) Pain management during surgery
 - d) Post-operative care of the surgical patient
 - e) Perioperative surgical procedures
- Unit 5 - Preparation of the operating room personnel
- a) Surgical scrub
 - b) Gowning
 - c) Gloving
 - d) Assistance during surgery
- Unit 6 - Preparation of the surgical patient
- a) Clipping
 - b) Surgical scrub techniques
 - c) Moving an anesthetized patient
 - d) Securing the animal to the surgery table
 - e) Placing the surgical drape
- Unit 7 - Anesthetic machine
- a) Non-rebreathing circuit
 - b) Rebreathing circuit
- Unit 8 - Suture Materials/patterns and needles
- a) suture materials and their properties
 - b) needles and their properties
 - c) suture patterns and their uses

- Unit 9 - Endotracheal Intubation
- a) selecting tube sizes
 - b) proper placement and attachment
 - c) disinfecting and cleaning
- Unit 10 - Monitoring Equipment
- a) setting up and using - pulse oximeter, PetMap, Doppler, multiparamenter monitors
- Unit 11 - IV Fluids
- a) setting up IV fluid pumps
 - b) IV fluid calculations



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