



VETM*3510 Principles of Surgery

Fall 2018

Section(s): C01

Department of Clinical Studies

Credit Weight: 0.25

Version 1.00 - August 29, 2018

1 Course Details

1.1 Calendar Description

The principles of surgery in various animal species are given. The lecture topics include patient and surgeon preparation, tissue handling instrumentation, suturing and surgical principles and approaches to various organ systems and anatomical regions.

Pre-Requisite(s): All Phase 1 courses.

Co-Requisite(s): All Phase 2 courses.

1.2 Course Description

This course is an introduction to basic and advanced principles of veterinary surgery. More specifically, the lecture topics include patient and surgeon preparation, asepsis in surgery, tissue handling, instrumentation & suturing. In addition to surgical principles, this course introduces the techniques for abdominal exploration and abdominal organ biopsy, principles of orthopedic surgery and bandaging techniques, principles of oncologic surgery, ovariohysterectomy and castration procedures as well as principles and practical techniques in dentistry.

This course consists of lecture sessions, independent website study with web-based assignments, a mastery list assignment as well as 8 practical laboratory sessions

1.3 Timetable

Timetable is subject to change. Please see WebAdvisor for the latest information.

1.4 Final Exam

Exam time and location is subject to change. Please see WebAdvisor for the latest information.

2 Instructional Support

2.1 Instructor(s)

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3 Learning Resources

Course notes will not be printed. Please refer to Courselink for course notes and/or Powerpoint presentations. <http://www.uoguelph.ca/vetsurgery/> will be the main reference for the first 9 lectures in this course. Alternatively, Teresa Fossum's Textbook of Small Animal Surgery (Mosby, 4th edition 2013) can also be used as a written reference. Earlier editions are also acceptable to review these basic concepts.

A DASIE along with basic instrumentation (one pair of needle drivers, a thumb forceps, a

mosquito hemostat and Mayo and/or suture scissors) are required to perform the independent suturing laboratory exercises during online review and for the practical laboratory sessions. The DASIE™ model will be graciously provided by Boehringer Ingelheim (Metacam®). Instruments (at minimum 1 Adson type thumb forceps, 1 Mayo- Hegar needle holder, 1 curved mosquito forceps, 1 Mayo scissor +/- 1 sharp-blunt suture scissor +/- Carmalt or smaller type hemostatic clamps to practice OHE) will need to be purchased by students from the provider of their choice. A complete list of recommended instruments and options for purchase will be provided to the class reps in the first week of classes.

For students who cannot afford or do not wish to purchase their own, instrument sets have been purchased through the student equipment fund (2012) and will be available for loan beginning after lecture 1. The instruments will be distributed through your course representative and must be returned in good working order to your class representative after the last laboratory session.

*****When borrowing the instrument set, the student acknowledges that he or she will owe \$35 (for replacement) should the instruments be lost, broken or fail to be returned as a complete set.*****

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Unit: Surgical instrumentation, suture materials and patterns

The student will be able to:

Surgical instruments:

- Identify various components of surgical instruments.
- Identify commonly used instruments (components of a basic surgical kit).
- Understand the correct and incorrect handling of commonly used surgical instruments.
- Discuss the use of and indication for commonly used surgical instruments.

Suture materials:

- Name the most common absorbable and non-absorbable suture materials.
- Compare the advantages and limitations of absorbable and non-absorbable suture materials.
- Compare the advantages and limitations of monofilament and braided suture materials.
- List the indications and contraindications of various suture materials.
- Identify and list various needle types.

- Discuss the qualities, indications and contraindications for various needle types.
- Describe how to handle suture as it comes out of a suture pack.
- Discuss the use of surgical staples and surgical adhesives.

Suture patterns:

- Describe the most common suture patterns.
- Understand the principle of and how to achieve a square knot.
- Understand the concept of a 'slip' and 'granny' knot.
- Understand the principles of how to place a simple interrupted and continuous suture pattern.
- Compare the advantages and limitations of continuous and interrupted suture patterns.
- List the indications and contraindications for the common suture patterns

2. Unit: Asepsis

The student will be able to:

Preparation of the surgical patient

- List and describe the steps involved in patient preparation for a surgical procedure.
- List and describe the indications and contraindications for different hair removal techniques.
- List disinfectants that are commonly used for patient skin preparation (iodine, alcohol, chlorhexidine).
- Compare the characteristics of disinfectants that are commonly used for patient skin preparation.
- Describe surgical site scrub techniques.
- Describe surgical draping procedures.

Preparation of the surgical team:

- List and describe the steps involved in surgeon hand preparation.
- List disinfectants that are commonly used for skin preparation.
- Compare the characteristics of commonly used disinfectants (iodine, alcohol, chlorhexidine)
- Compare characteristics of paper and cloth drapes and gowns.
- List the indications for proper surgical attire (hat, mask, gown and gloves).
- Recognize sterile and unsterile portions of a surgical gown.
- Describe surgical draping techniques.

- Describe strike through.

Sterilization techniques:

- List and describe the various sterilization procedures used on surgical equipment.
- Describe the indications, qualities and limitations of each method of sterilization.
- List methods used to confirm the sterility of instruments or surgical packs.
- Describe the use and limitations of various sterilization indicators.

3. Unit: Principles of Abdominal Surgery

The student will be able to:

- Describe common surgical approaches to the abdominal cavity.
- Identify the advantages and limitations of common surgical approaches to the abdominal cavity.
- Identify and list the indications of common surgical approaches to the abdominal cavity.
- List the principles of abdominal incision and closure techniques.
- Describe potential postoperative complications associated with abdominal closure and healing and how to handle those clinically.
- Describe the steps of a complete exploratory laparotomy.
- Describe the general principles of various abdominal organ biopsy technique

4. Unit: Bandaging

The student will be able to:

- Name and describe the function of the different layers of a bandage.
- Describe the principles of application of the different layers of a bandage.
- Describe the potential complications associated with bandages.
- Describe the pathophysiology and the treatment of these complications.

5. Unit: Principles of Surgical Oncology

The student will be able to:

- Describe common surgical principles that apply to oncologic surgery.
- Identify the role of surgery in the diagnosis, palliation and cure of cancer.
- List the indications for surgical intervention in a cancer patient.
- List the contraindications for surgical intervention in a cancer patient.

- List the causes of treatment failure and contraindications for surgical intervention in a cancer patient.
- Describe the principles of incisional and excisional biopsy.

6. Unit: Ovariohysterectomy

The student will be able to:

- Describe the indications, advantages and potential disadvantages to performing OHE.
- Describe the surgical preparation required for ovariohysterectomy in dogs and cats.
- Describe the surgical approach for ovariohysterectomy (OHE).
- Describe 3 methods available to identify the genital tract during OHE.
- Understand and describe how to use of a spay hook to retrieve the genital tract.
- Understand and describe the steps to involved in performing an ovariohysterectomy
 - Using a modified 3-clamp technique
 - Using a 3-clamp technique
 - Options to safely ligate the ovarian pedicles and uterine body.
 - Options to address the broad ligament.
- Describe potential intraoperative complications associated with OHE.
- Describe how to identify and retrieve a bleeding pedicle.
- Describe potential postoperative complications associated with OHE.
- Describe technical considerations associated with performing an OHE in an animal that is in heat or pregnant or has pyometra.

7. Unit: Canine and feline castration

The student will be able to:

- Describe the indications, advantages and potential disadvantages to performing castration.
- Describe the surgical preparation required for castration in dogs and cats.
- Describe the surgical approach for feline and canine castration.
- Describe the difference between open and closed castration techniques.
- Understand and describe the steps involved in performing a feline and canine castration.
- Understand and describe the differences in techniques used to perform canine and feline castration.
- Describe the two techniques for feline castration (figure of 8 vs knots).
- Describe the possible intraoperative complications associated with feline and canine castration.
- Describe the possible postoperative complications associated with feline and canine castration.

8. Unit: Prophylactic antibiotics in surgery

The student will be able to:

Classification of surgical wounds

- Describe the various types of wounds and identify which wounds would benefit from antibiotic treatment.
- Identify a specific type of wound based on a given case scenario.

Factors that influence the postoperative infection rate

- List the factors associated with surgical procedures that influence the development of postoperative infections.

Bacteria normally encountered in surgical patients

- Name bacteria commonly encountered in various tissues.
- Name an effective preventative antibiotic based on a given case scenario.

Institution and duration of antibiotic prophylaxis

- Identify the most efficacious time to start prophylactic antibiotic therapy based on a given case scenario.
- Determine an adequate duration of treatment based on a given case scenario.

Complications of antibiotic prophylaxis.

- Discuss the complications associated with indiscriminate antibiotic use, including shedding of resistant organisms and superinfection.

9. Unit: Introduction to fracture fixation and coaptation

The student will be able to:

Fracture healing

- Describe the blood supply to bone in the normal, fractured and healing states.
- Describe the effect of blood supply variations on fracture healing.

- Recognize and describe the three forms of bone healing and the conditions leading to each one.
- Describe the concept of strain and apply this concept to secondary bone healing.
- Identify and describe complications of bone healing.
- Formulate guidelines for the correction of the principle conditions delaying bone healing.

Fracture repair

- Name the different forces acting on the bone.
- Discuss the importance of these forces when repairing a fracture.
- Discuss the relative strengths and weaknesses of each type of implant with respect to these forces.
- Describe the principles, indications, contraindications and risks associated with external coaptation.
- Describe the principles, indications, and contraindications of external fixation.
- Describe the biomechanical principles that make an external fixator effective.
- Discuss the principles, indications, contraindications and the risks associated with the use of intramedullary pins, cerclage wires, interlocking nails, bone screws and bone plates.
- Name the different types of bone plates and explain their respective indication

10. Unit: Independent Suture Lab (Independent learning using website materials and DASIE)

The student will be able to:

Basic instrument handling

- Perform and demonstrate correct surgical instrument handling.

Knot tying

- Create square knots using instrument tying techniques.
- Place circumferential and transfixing ligatures on a pedicle.

Interrupted suture patterns

- Perform and demonstrate the most common interrupted suture patterns (simple interrupted, cruciate, vertical mattress and horizontal mattress patterns) using correct surgical techniques.

Continuous suture patterns

- Perform the most common continuous suture patterns (simple continuous, Lembert, Cushing, and Ford interlocking patterns) using correct surgical techniques.

Suture materials

- Identify common suture materials.
- Describe the advantages and limitations of common suture materials

11. Unit: Practical Laboratory Sessions

Laboratory 1: Asepsis

The student will be able to:

- Correctly open a gown pack and a glove pack using aseptic technique.
- Perform hand preparation using correct technique.
- Perform correct hand drying and gowning using sterile technique.
- Perform closed gloving using sterile technique.

Laboratory 2: Asepsis & Draping

The student will be able to:

Perform patient preparation using a model.

- Correctly open a drape and laparotomy sheet pack.
- Perform open gloving (wearing a gown).
- Perform draping of a DASIE model using correct, sterile technique.
- Apply a laparotomy sheet using sterile technique.

Laboratory 3: Asepsis, draping & suturing

The student will be able to:

- Perform patient preparation using a model.
- Correctly open a gown pack and a glove pack using aseptic technique.
- Correctly open a drape and laparotomy sheet pack using aseptic technique.

- Correctly open an instrument pack using aseptic technique.
- Perform hand preparation using correct technique.
- Perform correct hand drying and gowning using sterile technique.
- Perform closed gloving using sterile technique.
- Perform draping of a DASIE model using correct, sterile technique.
- Apply a laparotomy sheet using sterile technique.
- Perform a surgical incision using a scalpel blade.
- Demonstrate the correct placement of square knots.
- Demonstrate the placement of simple interrupted and continuous suture patterns using correct instrument handling and surgical technique.

Laboratory 4: Bandaging

The student will be able to:

- Correctly place an effective soft padded bandage on a limb model.
- Correctly place an effective Robert-Jones bandage on a limb model.
- Correctly create and integrate a fiberglass splint into a soft padded bandage using a limb model.
- Correctly apply and safely remove a fiberglass cast from a limb model.

Laboratory 5: Surgical Oncology

The student will be able to:

- Identify skin tension lines and appropriate direction of skin closure after mass removal.
- Understand the concept of lateral margin measurement.
- Understand the concept of and how to identify deep fascial planes.
- Perform incisional and excisional biopsies using a punch biopsy instrument and a scalpel blade.

Laboratory 6: Daisy OVH

The student will be able to:

- Complete all the tasks from laboratory 3 (except patient preparation).
- Correctly approach the abdominal cavity of a DASIE model for ovariohysterectomy.
- Perform an ovariohysterectomy on a DASIE model using a modified 3-clamp technique.
- Correctly perform a 3-layer abdominal wall closure.

Laboratory 7 & 8: Dentistry

Lab 7

The student will be able to:

Anatomy, nomenclature, physical exam of oral cavity, head and neck, introduction to charting

- Identify and name by the triadian system, all deciduous + adult teeth of the dog/cat.
- Describe the number of deciduous and adult teeth, and how to distinguish the difference between them.
- Describe the landmarks of 4/8/9
- Identify the anatomical location of the relevant nerves and blood vessels in relation to risk factors for dentistry (as covered in the lab)
- Explain the different terminology and grades of oral malocclusions.
- Perform a systematic physical exam of the head and oral cavity as part of the COHAT Comprehensive Oral Health Assessment.
- Complete all sections of a dental chart including filling out the physical exam
- List the acronyms for periodontal disease
- Practice grading of periodontal disease

Periodontal disease, introduction to radiographic interpretation, charting continued

- Identify and classify different components of periodontal disease from photos and simulated models.
- Perform the correct grading of periodontal disease.
- Practice basic Radiographic Interpretation-distinguish between a deciduous and adult tooth
- Discuss how periodontal disease appears radiographically for common lesions such as abscess, furcation, broken tooth, resorptive lesions
- Complete all sections of a dental chart including filling out the physical exam
- List the acronyms for periodontal disease
- Practice grading of Periodontal disease

Equipment, scaling + polishing, charting continued

- Identify and properly handle and use scalers, curettes and polishers.
- Identify risk factors for inappropriate use of the dental instruments.
- Discuss importance of sharpening/care, sand/oil and angles and identifying when instruments need to be sharpened.
- Explain the process of performing a thorough dental cleaning: chlorhexidine flush,

- supragingival scaling, subgingival curettage, subgingival polishing
- Understand how to determine if the dental cleaning has been done thoroughly and appropriately
- Complete all sections of a dental chart including filling out the physical exam
- List the acronyms for periodontal disease
- Practice grading of Periodontal disease

Lab 8

The student will be able to:

Radiology positioning, parallel and bisecting angles, radiation safety

- Practice appropriate animal positioning for dental radiographs.
- Explain the theory of parallel and bisecting angles
- Position the cone and predict the outcome of the radiograph
- Understand concept of foreshortened and lengthened angles during interpretation of the dental radiograph
- Discuss the importance of radiation safety and personal protective equipment.
- Describe what is a good quality vs. a poor quality dental radiograph.
- Understand the importance of whole mouth radiographs
- Identify digital radiograph equipment types/options

Techniques for dental block, analgesia, drug calculations

- Name and locate the four major dental blocks
- Know the anatomical areas affected by each block
- Discuss the specific techniques of each blocking site and risks for dogs and cats
- Discuss drugs used for analgesia, dose and concentration
- Calculate the toxic dose of local analgesics

“Humane euthanasia” aka extractions

- Identify indications for extractions
- Identify the anatomy of tooth being extracted (number of roots, surrounding structures; vessels, nerves etc.)
- Describe the steps that may be involved to extract a tooth: Gingival flap, bone debridement, tracing of the periodontal ligament, elevating and suturing gingiva.
- Practice extracting a tooth from the simulator

5 Teaching and Learning Activities

A surgery website (<http://www.uoguelph.ca/vetsurgery/>) has been designed to provide students with didactic information, images and current video clips to enhance learning and complement the topics discussed in class. A variety of information is available on this site so a 'Principles of surgery' map is provided to help you navigate through the sections that are required for this course. Independent review and study of the relevant website sections as well as completion of the online quizzes (on Courselink) are mandatory and must be completed as scheduled in order to prepare for lectures or laboratories. You will be provided with 11 hours of independent time in your schedule to perform these tasks along with some of the mastery list work. These hours are strategically placed in your schedule for online review prior to specific laboratories and we encourage you to use them as such as you will get more out of each lab if you come prepared!

Other materials found on this website are available for extra-curricular review – you are welcome to explore but do not need to review all of it right now!

Suture Mastery List

Completion of the self-directed 'Suture Mastery List' will allow you to practice your suturing techniques in preparation for the practical laboratory sessions. You are expected to practice a series of suture patterns on your DASIE using the surgery website as a reference – you can work in teams if you wish. **It is expected that you will arrive at Lab 3 prepared to demonstrate the skills listed on the mastery list to one of the instructors by the end of the lab.** You are encouraged to practice in advance with your classmates and perform the suture patterns together; this will allow you to 'critique' each other's technique and possibly help each other with any difficulties. There will be 3 drop in sessions (see courselink) in advance of this lab that you can attend for assistance if you are having trouble with any of the patterns.

Surgical Asepsis Mastery List

The surgical asepsis mastery list contains a list of procedures that should be observed by each student. The objective of this exercise is to familiarize the student with common surgical preparation techniques and to give the student the opportunity to see these procedures being performed on a 'real-life' patient in a clinical context. It also allows students to witness how the phase 3 spay and neuter labs run. **This task can be performed during any 3rd year spay / neuter session at the CCRF (Tuesdays & Thursdays from Oct 12th to Nov 30th & Jan 9th to March 29th at ~8am). Allow 1 to 1.5 hours for your visit at the CCRF. **Attendance at the CCRF is limited to 5 people per session due to space restrictions. A sign up sheet is available on Signupgenius for the CCRF – you will get an email! Please sign up early and plan ahead for a date that is convenient for you and fits in your class schedule.**

****Surgical scrubs and a lab coat are required to enter any of the surgical areas.** The CCRF building has restricted entry so you will need your proximity access card to enter. Note that there is no storage area in the clinic and CCRF building and that outside shoes cannot be worn in the prep room or surgery area so please bring a pair of indoor shoes when attending your session.

*** Hand in your signed form to the course coordinator no later than March 30th

Practical Laboratory Sessions

Faculty, veterinarians and technicians will be available to teach, provide feedback and to answer any questions during each laboratory session. Supervising faculty and veterinarians will assess each student's preparation, knowledge of the procedures to be performed and skills demonstrated during the exercise.

Attendance, participation & demonstration of appropriate preparation for laboratories will contribute to 16% (2 marks per lab) of the final course grade.

****Review of the relevant online materials (patient and surgeon preparation, including: how to open a pack (instrument, linen, suture, blade, gloves), patient skin preparation, hand scrubbing, drying of hands, gowning, gloving, performing a sterile final preparation in surgery, draping, applying a laparotomy sheet, basic instrumentation, how to set up an instrument table, how to install and remove a blade, and suturing and Surgical tips and tricks) and completion of the instrument handling / knot tying and suturing Mastery List is required prior to attending laboratory 6 (DASIE Ovariohysterectomy).***

****You must wear scrubs for all these laboratory sessions and bring your own DASIE and instruments for laboratories # 1,2,3 and 6***

*****Please attend your assigned sessions. If this is not possible, please switch with someone since there is limited space for each lab session. Make-up laboratory sessions are not possible therefore a missed laboratory will lead to losing the experience.** The Course Coordinator will determine what remedial activity will be required of students who miss a lab and have received academic accommodation through the Associate Dean, Students. Students that miss a lab and have not been granted accommodation will receive zero for that lab session.

5.1 Lecture

Topic(s): Introduction to 3510

Reference(s): Instructor- Oblak

Brief introduction to the course and website and opportunity for questions – ****PLEASE READ THE COURSE OUTLINE PRIOR TO THIS SESSION****

Topic(s): Lecture 1

Reference(s): Instructor- Gibson

Introduction to basic surgical instrumentation

Topic(s): Independent time 1

Reference(s): Instructor- Oblak

Instrumentation online study assignment & Quiz 1 (3%) will close Monday September 24, 2018 at 11:59 PM -

Topic(s): Lecture 2

Reference(s): Instructor- Gibson

Suture material and knotting

Topic(s): Lecture 3

Reference(s): Instructor- Gibson

Suture patterns and suturing technique

Topic(s): Independent times 2-4

Reference(s): Instructor- Oblak

Suture materials, suture patterns & Tips and tricks on suturing online study assignment & online Quiz 2 (3%) will close Monday October 1, 2018 at 11:59 PM

Topic(s): Lectures 4 & 5

Reference(s): Instructor- Oblak

Surgical asepsis I & II

Topic(s): Independent times 5-6

Reference(s): Instructor- Oblak

Principles of asepsis online study assignment and quiz 3 (3%). Quiz 3 will close Friday October 19, 2018 at 11:59 PM

Topic(s): Lectures 6 & 7

Reference(s): Instructor- Oblak

Principles of abdominal surgery I & II How to open and close the abdominal cavity)

Topic(s): Independent time 7

Reference(s): Instructor- Oblak

Online review of surgical approach to the abdominal cavity (how to open, how to close), exploratory laparotomy and basic organ biopsies

Topic(s): Lecture 8

Reference(s): Instructor- Oblak

The exploratory laparotomy

Topic(s): Lecture 9

Reference(s): Instructor- Oblak

Basic organ biopsy techniques

Topic(s): Lecture 10

Reference(s): Instructor- Oblak

Complications of abdominal surgery

Topic(s): Lecture 11

Reference(s): Instructor- Moens

Bandaging – A review

Topic(s): Independent time 8

Reference(s): Instructor- Oblak

Online review (Courselink) of bandaging videos in preparation for this lab session

Topic(s): Lectures 12 & 13

Reference(s): Instructor- Oblak

Principles of surgical oncology I & II

Topic(s): Independent time 9

Reference(s): Instructor- Oblak

Online review (Courselink) of dentistry materials in preparation for the dentistry labs

Topic(s): Lecture 14

Reference(s): Instructor- Oblak

Feline and canine ovariohysterectomy

Topic(s): Independent time 10-11

Reference(s): Instructor- Oblak

Online review of ligature placement and ovariohysterectomy videos in preparation for DASIE spay laboratory. Also review opening and closing the abdominal cavity

Topic(s): Lecture 15
Reference(s): Instructor- Singh

Use of antibiotics in surgical patients

Topic(s): Lecture 16
Reference(s): Instructor- Oblak

Feline and canine castration

Topic(s): Lectures 17 & 18
Reference(s): Instructor- Moens

Introduction to fracture fixation and coaptation I & II

5.2 Lab

Topic(s): Laboratory 1: Asepsis 1 (2hr) *Review the relevant videos prior to this lab session.

This mandatory two-hour session will allow students to experience and practice the steps involved in aseptic surgeon preparation: specifically how to open a gown pack and a pack of gloves sterilely, how to perform hand scrubbing, gowning and closed gloving.

Topic(s): Laboratory 2: Asepsis 2 (2hr) *Review the relevant videos prior to this lab session

This mandatory two-hour session will allow students to experience and practice the steps involved in patient preparation: specifically how to perform skin preparation (using a plastic model), how to open a drape and laparotomy sheet pack sterilely, and how to perform patient draping with application of a laparotomy sheet (using a DASIE model). (towel clamps provided separately)

Topic(s): Laboratory 3: Asepsis + Suturing (3hr) *Review the relevant videos prior to this lab session.

This mandatory three-hour session will put all the tasks learned thus far together and will allow students to experience and practice the following: Open an instrument pack, open a gown and laparotomy sheet pack, open a suture pack, blade and glove pack. The student will perform all the steps involved in surgeon preparation (hand scrubbing, gowning and gloving), final preparation of the patient and patient draping with application of a laparotomy sheet. The student will set up an instrument table, safely install (and eventually remove) a blade on a scalpel handle, practice basic suturing skills (secure square knots in simple interrupted and continuous patterns +/- buried knot) and perform safe disposal of sharps at the end of the lab.

Topic(s): Laboratory 4: Bandaging (2hr) * Review the bandage videos posted on Courselink

This mandatory laboratory session will allow students to practice placing light padded bandages, splints and cast on a canine leg model. Complications associated with bandages and their prevention will be discussed in lecture.

Topic(s): Laboratory 5: Surgical Oncology (biopsy and mass removal) (2hr) *Review the relevant video and lab manual prior to this lab session.

This mandatory 2-hour session will allow students to learn and practice basic surgical oncology principles and techniques. During the lab, the student will practice identifying skin tension lines and the appropriate direction of closure of skin wounds, discuss and identify fascial planes in various locations and practice incisional and excisional biopsy techniques.

Topic(s): Laboratory 6: DASIE Ovariohysterectomy (4hr) + Model making pre-lab (1hr)

This mandatory four-hour session will allow students to perform all the tasks they have learned thus far (see laboratory 3) and in addition will allow students to experience and practice the steps involved in performing a modified 3-clamp ovariohysterectomy using a string and bead model within a DASIE. Each student will attend a 1hr pre-lab session where they will make their own DASIE spay models. This session will help students review and understand the anatomy of the genital tract and the steps involved in the procedure.

Topic(s): Lab 7 & 8 Dentistry (3h) *Review the relevant lab materials on courselink prior to this lab session.

Reference(s): Instructors: Joy & Wichtel

These 2 mandatory 3 hour labs will allow students to become familiar with dental anatomy, nomenclature, physical exam of oral cavity & head and neck, charting, periodontal disease, radiographic interpretation, equipment, scaling + polishing, radiology positioning, radiation safety, techniques for dental block, analgesia, drug calculations and dental extractions

6 Assessments

Assessment will include: lab attendance (16%), online quizzes (9%), mastery list completion (5%), a midterm (20%) and a final examination (50%).

On-line computer quizzes must be completed according to the schedule posted on Courselink. There are 3 computer quizzes, worth in total 9% of the final mark. Each quiz must be completed on time with a minimum grade of 70% in order to obtain 2 marks towards the final grade. If a grade < 70% is obtained, the online quiz can be repeated once, for 1 mark, if a grade >70% is obtained when the quiz is repeated. Computer quizzes can be completed using the course materials or with classmates as long as everyone involved participates in the thought process.

Online quizzes will be in the form of true or false and multiple-choice questions.

Midterm and final examination will be in the form of: true or false, multiple choice, and short-written answers and will be somewhat proportional to the amount of lecture/lab time devoted to each topic. Examination questions will include reference to material covered in class, in website materials (including pictures and videoclips), during the laboratory session and in course notes. ***You must wear scrubs for all these laboratory sessions and bring your own DASIE and instruments for laboratories # 1,2,3 and 6.**

Difficulties in understanding course material should be directed to the instructors who presented the material in question or to the course coordinator as soon as problems are recognized.

Summary of Marks for VETM*3510

Lab sessions 8x2% =	16%
Computer quizzes 3X3% =	9%
Mastery Lists 2x2.5%=	5%
Midterm =	20%
Final Exam =	<u>50%</u>
	100%

Midterm review:

Following the mid-term examination, there will be a three-week period in which the examination can be reviewed. There will not be an opportunity to review the examination outside of this period. To arrange a time to review the examination, please contact the Administrative Assistant to the Faculty and Chair in the Department of Clinical Studies, Linda Wing (lwing@uoguelph.ca).

Midterm re-write:

The course coordinator will determine the format of a make-up examination for those students who miss the midterm, and have been granted academic accommodation through the Associate Dean, Students. The resit session will occur on Tuesday November 27, 2018 at 6pm.

7 Course Statements

7.1 Administrative

For questions regarding academic consideration, continuation of study, academic misconduct, safety, confidentiality, and experiential learning involving use of animals, please refer to the Phase information on the OVC website.

7.2 Course

To prepare undergraduate veterinary students for Phase 3 surgical lectures and surgical training

laboratories and Phase 4 clinical rotations by introducing basic and more advanced surgical concepts and skills.

Instruction will consist of formal lectures, self-directed website study, self-directed suture exercises, completion of a mastery list and 6 practical laboratory sessions.

8 University Statements

8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The regulations and procedures for [Academic Consideration](#) are detailed in the Undergraduate Calendar.

8.3 Drop Date

Courses that are one semester long must be dropped by the end of the fortieth class day; two-semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for [Dropping Courses](#) are available in the Undergraduate Calendar.

8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required, however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance, and not later than the 40th Class Day.

More information: www.uoguelph.ca/sas

8.6 Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The [Academic Misconduct Policy](#) is detailed in the Undergraduate Calendar.

8.7 Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

8.8 Resources

The [Academic Calendars](#) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.
