

Course Number/Title: ***VT 240 Clinical Laboratory Procedures I & VT 241 Lab **Year:** Fall 2012

Department: Veterinary Technology

Credit Hours: Lecture 1
Lab 2

Required Text:

Hendrix. Laboratory Procedure for Veterinary Technicians, current ed. (ISBN: 9780323045728)

Foreyt. Veterinary Parasitology Reference Manual, current edition (ISBN: 0813824192)

Rebar, A Guide to Hematology in Dogs & Cats, current edition (ISBN: 1893441482)

Harvey. Atlas of Veterinary Hematology, Blood and Bone Marrow of Domestic Animals. Saunders an imprint of Elsevier. Current Edition. [ISBN-13: 978-0-7216-6334-0]

Days/Time:

Lec: TR 8:00 am - 9:20 am

Lab:

TR 12:50pm - 2:50pm (Lab 02)

TR 3:00 pm - 5:00 pm (Lab 03)

F 12:10 pm - 2:10 pm (Lab 02)
2:20 pm - 4:20 pm (Lab 03)

Instructor: Sadie Kenney, RVT

Room #:

Lecture – FER 507

Lab - FER 509

Office Hours: 8AM-4PM MTWRF

Online time: 8AM – 4PM (when not in class)

Phone #: 785-460-5468

Email: sadie.kenney@colbycc.edu

Course Placement: Sophomore

Prerequisite: **See Below

****Prerequisite:** VT 145 & VT 146, current standing as a freshman in veterinary technology.

*****Lectures & Laboratory courses are required to be taken together in the same semester.**

Rationale

Students will acquire job skill competencies for graduate veterinary technicians in clinical laboratory skills and knowledge.

Course Description

Prerequisite: VT 145 and VT 146 (Introduction to Clinical Laboratory Techniques and Lab) Co-requisite: VT 241 (Clinical Laboratory Procedures I Laboratory). Theory, principles, practice and study of performing laboratory tests using both established methods and the newest procedures are included in this course.

Topics covered:

- Venapuncture
- Hematology, including
 - Preparation of smears and stain
 - CBC
 - Hematocrit
 - Hemoglobin
 - Total Protein
 - White cell count
 - Red cell count
 - Microscopic blood film examination
 - Leukocyte differential
 - Erythrocyte morphology
 - Platelet count/evaluation
 - Reticulocyte count
 - Heartworm testing
 - Blood parasite identification
- Cytology
 - Prepare and evaluate transudates, exudates and cytological specimens
 - Collect, store and ship specimens

Lab Description

Prerequisite: VT 145 and VT 146 (Introduction to Clinical Laboratory Techniques and Lab) This laboratory course teaches essential skills necessary for the Veterinary Technician in the areas of hematology and cytology.

Topics covered:

- Venapuncture
- Hematology, including
 - Preparation of smears and stain
 - CBC
 - Hematocrit
 - Hemoglobin
 - Total Protein
 - White cell count
 - Red cell count
 - Microscopic blood film examination
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CCC Student Learning Outcomes Addressed in This Course

The CCC assessment plan meets the general education requirements by continually assessing its effectiveness through student outcomes. An example of your work, a paper, some test questions, a presentation, or other work may be selected for assessment. This process will not affect your grade, will not require you do additional work and your evaluation will be confidentially handled. Through your cooperation we are working to improve teaching and learning at Colby Community College.

Learning Outcomes VT240

1. Students will perform laboratory tests and procedures following specimen collection, including but not limited to serology, cytology, hematology, urinalysis, parasitology and will maintain laboratory equipment and supplies.

Learning Outcomes VT241

1. Students will perform laboratory tests and procedures following specimen collection, including but not limited to serology, cytology, hematology, urinalysis, parasitology and will maintain laboratory equipment and supplies.

Course Outline

- A. Hematology
 - a. Venapuncture technique
 - i. Equipment
 - ii. Procedure
 - iii. Challenges
 - iv. Various species and sites
 - v. Various anticoagulants
 - vi. Vacutainers
 - b. White blood cell counts
 - i. Various WBC count techniques
 - ii. Hemocytometer
 - iii. WBC conditions
 - c. Differentials
 - i. Slide making and coverslips
 - ii. Staining techniques
 - iii. WBC identification
 - iv. RBC morphology
 - v. Platelet evaluation/counts
 - vi. Absolutes
 - d. Packed cell volume
 - i. Micro techniques
 - ii. Macro techniques
 - iii. Total protein with refractometer
 - e. Heartworm testing
 - i. Screening procedures
 - ii. Diagnostic procedures
 - f. Cell differences in various species
 - g. Hemogram
 - i. RBC count or estimated RBC
 - ii. Hemoglobin or estimated hemoglobin
 - iii. Indices
 - iv. Erythrocyte sedimentation rates
 - v. Reticulocytes
 - h. Maturation
 - i. WBCs
 - ii. RBCs
 - i. Avian hematology

- i. Venipuncture
 - ii. WBC
 - iii. Differential
 - iv. PCV
 - j. Blood parasites
 - i. *Anaplasma sp.*
 - ii. *Eperythrozoon sp.*
 - iii. *Babesia sp.*
 - iv. *Ehrlichia sp.*
 - v. *Cytauxzoon sp.*
 - vi. *Hepatzoon sp.*
 - vii. *Hemobartonella sp.*
 - viii. *Toxoplasma sp.*
 - ix. *Trypanosoma sp.*
 - k. Anemia—classification
 - l. Miscellaneous cells
 - i. Mitotic
 - ii. Degenerated
 - iii. Basket
 - iv. Smudge
 - m. Human
 - i. CBC
 - ii. RBC
 - iii. PCV
 - iv. TP
 - v. Differential
 - vi. Conditions
- B. Cytology
 - a. Reproductive
 - i. Sperm
 - ii. Vaginal smears
 - b. Tissue
 - c. Fluid
- C. Histology
- D. Ectoparasites
 - a. Ticks
 - b. Fleas
 - c. Mites
- E. Mycology
- F. Euthanasia and grief

Course Learning Objectives

- A. Students will demonstrate correct usage and maintenance of general and specialized laboratory equipment necessary to obtain accurate and reliable test results.
- B. Students will apply a quality control program for a clinical laboratory.
- C. Students will demonstrate clinical procedures with reliable and accurate results.
- D. This course is designed to give sophomore Veterinary Technology students the opportunity to practice clinical pathology procedures which are required of graduate Veterinary Technicians.
- E. At the successful completion of this course and its companion required course in Veterinary Technology (with a GPA of 2.0), sophomore Veterinary Technician students shall be eligible to take the State Board examination leading to the title of Registered Veterinary Technician.
- F. Given the characteristics of the patient and the requested analysis, the Veterinary Technician will properly prepare, handle and submit appropriate samples for diagnostic analysis in order to ensure maximum accuracy of results.
- G. Given the characteristics of laboratory instruments and equipment, the Veterinary Technician will determine proper maintenance and quality control procedures necessary to ensure accurate results.
- H. Given the characteristics of the patient, the specimen submitted and the results of the analysis, the Veterinary Technician will be able to recognize accurate vs. erroneous results in order to provide maximum diagnostic benefit.
- I. Given the laboratory specimen collected and characteristics of the patient, the Veterinary Technician will determine appropriate methodology and carry out analytical procedures necessary to provide accurate and precise diagnostic information.
- J. Having determined the accuracy of analytical results, the Veterinary Technician will work with the Veterinarian to determine if a need exists for additional laboratory tests that will provide useful diagnostic information.

Course Competencies

Students will be required to demonstrate proficiency in job competencies utilizing the following competency rating scale:

- 3: Excellent; able to work independently
- 2: Satisfactory; entry level skills
- 1: Unsatisfactory
- 0: Not applicable

EX09A	Perform laboratory procedures: birds Perform a CBC on avian blood sample
EX13A	Collect blood samples: birds
LB03	Implement appropriate quality control measures Perform appropriate quality control measures for: CBC/ differential count Differential count/ absolutes PCV/ buffy coat

LB06A	<p>Perform CBC: hemoglobin</p> <ul style="list-style-type: none"> Load hemoglobinometer correctly Clean clip Rotate blood sample Deliver appropriate size of blood drop Hemolize sample with saponin stix Close clip correctly Load clip into instrument Read instrument correctly Record results Recall normal values for species working on
LB06B	<p>Perform CBC: packed cell volume</p> <ul style="list-style-type: none"> Load PCV tube correctly Select correct PCV tube Obtain 2 dampened chem. Wipes Rotate blood sample Fill PCV on the colored end Wipe tube clean with damp chem. Wipe Seal clear end with clay Repeat the procedure with a second PCV tube Place PCV tubes in balanced position in centrifuge while holding the enter seal Place enter seal into correctly location and shut door Set machine correctly Withdraw tubes after spinning Perform PCV reading with Spirocrit reader Perform PCV reading with Critocap reader Record results <ul style="list-style-type: none"> PCV readings must be within 1-2% of each other Record highest value Recall normal values for species working on
LB06C	<p>Perform CBC: total protein</p> <ul style="list-style-type: none"> Clean TS meter chamber with alcohol while meter is in case Perform total protein reading using Shuco TS meter <ul style="list-style-type: none"> Open chamber door Clean with alcohol on chem. wipe Break PCV tube just above buffy coat Attach bulb to broken end Expel plasma/ serum onto chamber Note if there are any glass chips on chamber Close chamber door Hold finger correctly over chamber door Read correct scale Record results Recall normal values Perform total protein reading using American Optical TS meter <ul style="list-style-type: none"> Open chamber door Clean with alcohol on chem wipe Close chamber door after cleaning Break PCV tube just above buffy coat Attach bulb to broken end Insert plasma/ serum into chamber at correct location Hold finger correctly over chamber door Read correct scale Record results Recall normal values for species working on

LB06D	<p>Perform CBC: white cell count</p> <p>Unopette</p> <ul style="list-style-type: none"> Select Unopette reservoir and microliter pipette Label Unopette correctly Check microliter pipette for flaws Poke hole in reservoir using microliter pipette shield Prepare a damp chem. Wipe Rotate blood sample Place lower third of microliter pipette in sample Fill microliter pipette to correct line Wipe microliter pipette with chem. wipe to remove blood Examine microliter pipette for air bubbles and dried blood Place microliter pipette into reservoir correctly Mix blood with diluent correctly Allow unopette to set for appropriate length of time Clean hemocytometer and cover slip with alcohol and chem. wipe Dry hemocytometer and cover slip properly Place cover slip on hemocytometer correctly Load hemocytometer chambers correctly <ul style="list-style-type: none"> Swirl reservoir contents Expel air bubbles from microliter pipette Load chamber Repeat on second side Place hemocytometer in microscope slide clip Focus microscope correctly Focus microscope initially on chamber closest to operator Drop condenser to lowest position Count white cells correctly <ul style="list-style-type: none"> Place hand tally in left hand and right hand on the fine focus and mechanical stage Go to top left primary square Count correct squares for appropriate Unopette Include cells partially located on L line Record cells counted Repeat white cell count on chamber two Record results separately for both sides Determine difference between counts on side one and two Proceed to calculations if the counts are appropriate for the Unopette selected Recall calculation formulas for three different white cell Unopettes Apply calculation formula to data for species working on Record results using correct units Determine that results are within 10% of the instructor's count <ul style="list-style-type: none"> Recall normal values for species working on <p>Automated cell counter</p> <ul style="list-style-type: none"> Obtain correct sample for the machine to be used Read instructions prior to using the machine Load machine appropriately Operate machine correctly Obtain results from machine <ul style="list-style-type: none"> Determine if results reflect normal or abnormal findings
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LB06E	<p>Perform CBC: Red Cell count: PCV</p> <ul style="list-style-type: none"> Estimate hemoglobin from PCV <ul style="list-style-type: none"> Recall formula Use formula correctly Record results correctly Recall normal values for species working on <p>Estimate red cell count from PCV</p> <ul style="list-style-type: none"> Recall formula Use formula correctly Record results correctly <p>Recall normal values for species working on</p> <p>Electronic cell counter</p> <ul style="list-style-type: none"> Obtain correct sample for the machine to be used Read instructions prior to using the machine Load machine appropriately Operate machine correctly Obtain results from machine Determine if results reflect normal or abnormal findings
LB07A	<p>Perform microscopic exam of blood film: prepare film and stain using a variety of techniques</p> <ul style="list-style-type: none"> Prepare film using slide technique <ul style="list-style-type: none"> Rotate blood sample Place appropriate size drop on one slide Use second slide in proper position to make smear Confirm correct appearance of slide Dry properly Label properly Stain properly Dry properly Place on microscope Prepare film using coverslip technique <ul style="list-style-type: none"> Rotate blood sample Place appropriate size drop on 22 x 22 size coverslip Place second coverslip on top in correct position Pull top coverslip off correctly Dry properly Stain properly Apply Vaseline to correct side of coverslip Mount coverslip on regular size microscope slide Label microscope slide Place on microscope
LB07B	<p>Perform microscopic exam of blood film: perform leukocyte differential—normal vs abnormal</p> <ul style="list-style-type: none"> Focus appropriately on microscope Focus on 10 X <ul style="list-style-type: none"> Find correct monolayer and start position Then focus on 40X Focus on 40X Apply immersion oil Focus on 100X Condenser in proper position Utilize proper hand positioning and focusing Use diff counter properly Count 100 white cells and identify cells in proper categories Label results correctly
LB07C	<p>Perform microscopic exam of blood film: evaluate erythrocyte morphology—normal vs abnormal</p> <ul style="list-style-type: none"> Focus microscope correctly (refer to LB00702) Evaluate 10 random fields while counting 100 white cells Note color, size, shape and inclusions Record results using correctly terminology and rating system

LB07D	Perform microscopic exam of blood film: estimate platelet numbers Evaluate 10 random field while counting 100 white cells Obtain average number of platelets per oil power field Observe size, shape, and color Record results using proper terminology
LB07E	Perform microscopic exam of blood film: calculate absolute values Obtain hemocytometer white cell count results Obtain differential percentage results Use correct formula Label results correctly Double check results
LB07F	Perform microscopic exam of blood film: correct white blood cell counts for nucleated cells Obtain hemocytometer white cell count results Obtain number of nucleated rbc's from differential count Use correct calculation formula Record results correctly
LB08	Calculate hematologic indices Obtain necessary lab results Use correct calculation formulas Use correct units on results
LB09	Perform reticulocyte count Rotate blood sample Put correct number of blood drops in test tube Put correct number supravital stain drops in test tube Mix correctly Allow to set for correct amount of time Make proper blood smear Dry properly Stain properly Dry properly Place on microscope Focus on 10X Find correct location on slide Focus on 40X Place immersion oil on slide Focus of 100X Use hands properly Use counting instrument properly Count the correct number of rbc's Record the correct number of reticulocytes Use calculation formula correctly Record results using correct units

LB10A	<p>Perform platelet count: Unopette (purple)</p> <ul style="list-style-type: none"> Select Unopette reservoir and microliter pipette Label Unopette correctly Check microliter pipette for flaws Poke hold in reservoir using microliter pipette shield Prepare a damp chem. Wipe Rotate blood sample Place lower third of microliter pipette in sample Fill microliter pipette to correct line Wipe microliter pipette with chem. wipe to remove blood Examine microliter pipette for air bubbles and dried blood Place microliter pipette into reservoir correctly Mix blood with diluent correctly Allow unopette to set for appropriate length of time Clean hemocytometer and cover slip with alcohol and chem. wipe Dry hemocytometer and cover slip properly Place cover slip on hemocytometer correctly Load hemocytometer chambers correctly <ul style="list-style-type: none"> Swirl reservoir contents Expel air bubbles from microliter pipette Load chamber Repeat on second side Place hemocytometer in microscope slide clip Focus microscope correctly Focus microscope initially on chamber closest to operator Drop condenser to lowest position Do a white count and if sides are even, continue to platelet count Count platelets correctly <ul style="list-style-type: none"> Place hand tally in left hand and right hand on the fine focus and mechanical stage Go to center primary square Focus in with 40x Include cells partially located on L line Record cells counted Repeat platelet count on chamber two Record results separately for both sides Recall calculation formulas for platelet Unopettes Apply calculation formula to data Record results using correct units Determine that results are within 10% of the instructor's count Recall normal values for species working on
LB10B	<p>Perform platelet count: automated cell counter</p> <ul style="list-style-type: none"> Obtain correct sample for the machine to be used Read instructions prior to using the machine Load machine appropriately Operate machine correctly Obtain results from machine Determine if results reflect normal or abnormal findings
LB14A	<p>Identify blood parasites: general considerations</p> <ul style="list-style-type: none"> Prepare slide for identification <ul style="list-style-type: none"> Use fresh blood smear Dry properly Stain properly Dry properly Place on microscope Focus on 10X Find correct location on slide Focus on 40X Place immersion oil on slide Focus of 100X Identify parasite: Genus name

LB14B1	<p>Identify blood parasites: <i>Dirofilaria</i> sp/ <i>Dipetalonema</i> sp: direct smear</p> <ul style="list-style-type: none"> Perform direct drop technique <ul style="list-style-type: none"> Obtain correct sample Rotate blood sample Place correct amount of blood on microscope slide Place coverslip Focus in correctly on 10X Observe coverslip for motion Perform direct smear technique <ul style="list-style-type: none"> Prepare film using slide technique <ul style="list-style-type: none"> Rotate blood sample Place appropriate size drop on one slide Use second slide in proper position to make smear Confirm correct appearance of slide Dry properly Label properly Stain properly Dry properly Place on microscope Observe film on 10X for microfilaria Confirm microfilaria on 100X
LB14B2	<p>Identify blood parasites: <i>Dirofilaria</i> sp/ <i>Dipetalonema</i> sp: Knotts</p> <ul style="list-style-type: none"> Obtain correct blood sample Rotate blood sample Use correct amount of blood Use correct lysing solution Spin sample for correct amount of time Decant sample properly Examine sample <ul style="list-style-type: none"> Add stain properly and mix with sample Place one drop of sample on slide and use coverslip Focus on 10X Observe entire coverslip field Differentiate any microfilaria noted Use micrometer scale properly Repeat examination for the entire sample contents
LB14B3	<p>Identify blood parasites: <i>Dirofilaria</i> sp/ <i>Dipetalonema</i> sp: filter test</p> <ul style="list-style-type: none"> Obtain correct blood sample Rotate blood sample Use correct amount of blood Use correct lysing solution Correctly use filter device Examine sample <ul style="list-style-type: none"> Add stain properly and mix with sample Focus on 10X Observe entire coverslip field Differentiate any microfilaria noted Use micrometer scale properly
LB14B4	<p>Identify blood parasites: <i>Dirofilaria</i> sp/ <i>Dipetalonema</i> sp: antigen kit</p> <ul style="list-style-type: none"> Obtain correct blood sample Read entire instructions for kit Apply instructions Record results List reasons for the using of the antigen test and the limitations of the test <ul style="list-style-type: none"> Occult heartworm <ul style="list-style-type: none"> All males All females Sterile males and females Only tests for female antigen

LB14C	Identify blood parasites: <u>Haemobartonella sp.</u> Draw an illustration of the parasite and identify characteristics Identify species of blood parasite on prepared slide
LB14D	Identify blood parasites: <u>Anaplasma sp.</u> Draw an illustration of the parasite and identify characteristics Identify species of blood parasite on prepared slide
LB14E	Identify blood parasites: <u>Babesia sp.</u> Draw an illustration of the parasite and identify characteristics Identify species of blood parasite on prepared slide
LB14F	Identify blood parasites: <u>Trypanosoma sp.</u> Draw an illustration of the parasite and identify characteristics
LB14G	Identify blood parasites: <u>Eperythrozoon sp.</u> Draw an illustration of the parasite and identify characteristics Identify species of blood parasite on prepared slide
LB14H	Identify blood parasites: <u>Ehrlichia sp.</u> Draw an illustration of the parasite and identify characteristics
LB15A	Identify external parasites: mites Explain proper slide making technique Describe identifying characteristics Identify species of parasite on prepared slide
LB15B	Identify external parasites: lice Explain proper slide making technique Describe identifying characteristics Identify species of parasite on prepared slide
LB15C	Identify external parasites: ticks Explain proper slide making technique Describe identifying characteristics Identify species of ticks on prepared slide
LB15D	Identify external parasites: fleas Explain proper slide making technique Describe identifying characteristics
LB15E	Identify external parasites: flies Explain proper slide making technique Describe identifying characteristics
LB20A	Perform cytologic evaluation: general considerations Describe various methods of slide preparation Exudates Transudates Describe proper sample handling Exudates Transudates Ear swab Vaginal smears Semen evaluation Impression smears Milk Describe proper staining techniques Describe the proper technique of cytologic evaluation Identify stages of estrous in the dog from vaginal smears Evaluate morphologic changes in semen Perform semen count Identify yeast from ear swab Differentiate inflammatory from non-inflammatory conditions Identify the presence of bacteria

LB20B	<p>Assist in collecting, preparing, and evaluating transudate, exudates and cytologic specimens (joint, cerebrospinal, airway, body cavity)</p> <ul style="list-style-type: none"> Assist veterinarian in preparing patient <ul style="list-style-type: none"> Anesthesia Surgical site preparation Collect correct instrumentation for procedure Collect correct sample containers Assist veterinarian in collecting samples Prepare sample correctly Examine prepared specimen
LB20C	<p>Perform fine needle tissue aspirates and impression smear preparation (differentiate benign vs malignant)</p> <ul style="list-style-type: none"> Differentiate benign versus malignant on prepared impression smear slides
LB20D	<p>Prepare and stain bone marrow specimens</p> <ul style="list-style-type: none"> Prepare bone marrow smears <ul style="list-style-type: none"> Assist veterinarian in preparing patient <ul style="list-style-type: none"> Anesthesia Surgical site preparation Assess pain management needs Collect correct instrumentation for procedure Collect preparation supplies Assist veterinarian in collecting samples Prepare sample correctly Examine prepared specimen
LB20E	<p>Collect, prepare, and evaluate ear cytology</p> <ul style="list-style-type: none"> Collect correct instrumentation for procedure Collect preparation supplies Collect samples Prepare sample correctly Examine prepared specimen
LB20F	<p>Collect, prepare, and evaluate canine vaginal smears</p> <ul style="list-style-type: none"> Collect correct instrumentation for procedure Collect preparation supplies Collect samples Prepare sample correctly Examine prepared specimen
LB20G	<p>Evaluate semen</p> <ul style="list-style-type: none"> Collect correct instrumentation for procedure Collect preparation supplies Collect samples Prepare sample correctly Examine prepared specimen
LB20I	<p>Assist with artificial insemination</p> <ul style="list-style-type: none"> Observe artificial insemination of the bitch
LB21B	<p>Collect samples, store and ship according to laboratory protocols</p> <ul style="list-style-type: none"> Explain proper method for sending a sample to an outside lab <ul style="list-style-type: none"> Sample collection Preservation of sample Shipping of a sample Safety procedures for sample handling History
NU04F1	<p>Halter, tie and lead horses</p> <ul style="list-style-type: none"> Apply halter correctly Tie horse correctly Lead horse correctly
NU04F2	<p>Halter, tie and lead cattle</p> <ul style="list-style-type: none"> Apply halter correctly Tie cattle correctly

NU04I1	Restrain cattle and horses Restrain cattle correctly Use chute correctly Use halter correctly Restrain horses correctly Use stocks correctly Use halter correctly
NU04I3	Restrain cattle and horses: apply bovine tail restraint Apply bovine tail restraint correctly
NU06A3	Temperature: horse Use thermometer correctly Recall normal temperature
NU06A4	Temperature: cow Use thermometer correctly Recall normal temperature
NU06B3	Pulse: horse Identify correct sites for obtaining pulse Recall normal pulse rate
NU06B4	Pulse: cow Identify correct sites for obtaining pulse Recall normal pulse rate
NU09E1	Apply equine tail wraps Apply equine tail wrap correctly
NU26	Collect/ evaluate skin scrapings Collect correct instrumentation for procedure Collect preparation supplies Collect samples Prepare sample correctly Examine prepared specimen

Method of Instruction

Lecture

Discussion (both face to face and online)

Online assignments

Laboratory application.

Method of Evaluation

Written exams, quizzes and practicals will be given for the students to demonstrate their proficiency in the required skills. Comprehensive practicals and written exams will be given at the end of the semester.

Grading System

90 - 100 = A

80 - 89 = B

70 - 79 = C

< 69 = F

Grading for the lecture portion of the course (VT 240) will be based upon the following:

Lecture Examinations	
4 Lecture Exams	150 pts each
Homework	
All Assignments	15-30 pts each
Quizzes (Announced and Unannounced)	Variable

Grading for the laboratory portion of this course (VT 241) will be based on an average of all assessment scores (this includes the large animal project), quizzes and laboratory practicals. Students must pass the hematology practical with a grade of 85% or higher in order to complete the course. For students who do not pass the practical with an 85% or better will be allowed to retake the practical one time. All students must pass assessments with a 3. Failure to turn in an assessment will result in failure of the course.

Course Requirements

Students will perform skills and apply laboratory knowledge in clinical pathology that will allow them to operate a lab under the direction of a veterinarian. These skills will help the doctor in diagnosing patients.

Because this course is a required course for graduation with a degree in Veterinary Technology, course requirements will be interpreted in light of the intent and objectives of the Veterinary Technology Program.

This course adheres to published Veterinary Technology Program Policies and Procedures; however, course requirements may be more stringent.

It is imperative that students review Veterinary Technology Program Policies and Procedures and understand the safety guidelines for this course as well as instructor expectation of the students' professional attitude and classroom conduct.

Veterinary Technology Program Policies and Procedures Section 9.02 states that "the Veterinary Technology student is expected to act in a professional manner in all classroom and activity situations. Students will act professionally in their dress, language and demeanor." Students who are disruptive to fellow classmates or the instructor by acting in an unprofessional manner may be required to leave the classroom.

If students check out equipment (such as CDs, Videotapes, Sutures boards, etc) to be used for instructional purposes in this class, they must fill out the appropriate Equipment Loan Agreement form. Failure to return the equipment in a timely manner will obligate the student to pay the price of the equipment value as stated on the Equipment Loan Agreement form. A hold will be placed on the student's grades, transcripts and diploma until the college is reimbursed for the cost of the equipment or the equipment is returned.

Students are required to attend all lecture and laboratory sessions as described in the Attendance Policy section of the syllabus.

Use of cell phones during class is prohibited (lecture/lab). Cell phones must be turned off prior to class and remain off during class time.

Legally, students may not record instructor conversations or lectures without the permission of the instructor involved.

Students are required to adhere to all policies regarding on-line and hybrid courses in the Veterinary Technology Program as outlined in the Veterinary Technology Policies and Procedures document.

Large Animal Project is a part of VT 240 & VT 241. (additional syllabus to follow)

Assignment Policy

Lab time missed by students is to be made up by the individual within a designated time period established by the instructor. Late written assignments may or may not be accepted, pending assignment instructions. For those assignments that are accepted, for every day that they are late 5%_ of the grade will be docked. This means if your assignment is 3 days late – 15% of the grade will be docked. [ie. 1Opt assignment perfectly done but 3 days late gets a grade of 8.5]. Students caught cheating or plagiarizing will receive a zero on that assignment. The second time they are caught cheating or plagiarizing will result in being expelled from the class with an "F" for the semester. Returning to the class the following year will be only by approval from the program instructors.

Test Policy

Tests may be scheduled at any time with advanced notice. If students are going to be absent, they must notify the instructor in advance and reschedule a time to make up the test. Tests must be rescheduled within a reasonable time frame (one to two days unless there are extreme extenuating circumstances). The test must be taken at the rescheduled time. After the instructor has graded and returned the test to the class, no make up is possible. If a note card is given by the instructor to be used on the next test, students must be in class at that time to receive the note card or have an excused absence.

No quizzes will be made up unless students are absent due to an illness or other excused absence (see definition of excused under Attendance Policy). Rescheduling for make up quizzes is subject to the same guidelines as those for major tests. In the case of illness, it is the students' responsibility, before the next class period begins, to contact the instructor to check and see if a quiz was given. Pop quizzes will be given whenever the instructor wishes. If a quiz is given at the beginning of class and students are late, they will not be able to make up the quiz. (Students must be seated at their desks when quizzes are being handed out.)

Academic Integrity Policy:

Colby Community College defines academic integrity as learning that leads to the development of knowledge and/or skills without any form of cheating or plagiarism. This learning requires respect for Colby's institutional values of quality, service and integrity. All Colby Community College students, faculty, staff, and administrators are responsible for upholding academic integrity.

Cheating is giving, receiving, or using unauthorized help on individual and group academic exercises such as papers, quizzes, tests, and presentations through any delivery system in any learning environment. This includes impersonating another student, sharing content without authorization, fabricating data, and altering academic documents, including records, with or without the use of personal and college electronic devices.

Plagiarism is representing or turning in someone else's work without proper citation of the source. This includes unacknowledged paraphrase, quotation, or complete use of someone else's work in any form. It also includes citing work that is not used and taking credit for a group project without contributing to it.

- The following procedure will be used for students who violate the policy:
- First Offense – Student will receive a zero for the assignment and the student will be reported to the Dean of Academic Affairs.
- Second Offense – The student will be reported to the Dean of Academic Affairs and removed from the class.
- Third Offense – The student will be reported to the Dean of Academic Affairs and dismissed from the college.
- Any questions about this policy may be referred to the Dean of Academic Affairs.

Attendance Policy

Each student is allowed two excused absences from lab, which is four hours total. (Excused means a letter from nurse, a phone call prior to lab or an arrangement made with the instructor at least one week in advance.) No messages carried by peers will be accepted. Arrangements must be done by student taking the excused absence. After two excused absences the student will make up four hours of lab time for each additional two hours of excused absences. Switching lab times with peers is not allowed.

An unexcused lab cut results in one week of duty—floors, ward care or wherever help is needed--that will be assigned by instructor. In addition, for each two hour lab that is unexcused, the student will make up four hours of lab time. (On time is defined as in the classroom and prepared to do coursework at the scheduled starting time. Anytime other than on time is late.)

Pathology Lecture attendance is left up to the students' own judgment. However, if quizzes or tests are given during lecture and the student has an unexcused absence from that lecture, the grade recorded will be a zero. If a student is absent for more than four lectures periods per eight weeks, then the grade for the class will automatically be dropped one letter grade. Absences due to extenuating circumstances will be reviewed by the program staff and adjustments made where merited.

Because attendance in lab and lecture is vital to the acquisition of workplace competencies, students are expected to be on time for all scheduled lectures and laboratory classes. (On time is defined as in the classroom and prepared to do coursework at the scheduled starting time. Anytime other than on time is late.) Students choosing to arrive late are responsible for checking with the instructor for announcements, assignments or notes they may have missed. In addition, late students may not be permitted to make up quizzes and/or will not be granted additional quiz or exam time beyond that scheduled in class.

Instructor's Expectations of Students' Professional Attitude and Classroom Conduct:

1. Students will be on time.
2. Students will dress professionally. (Expectations are explained below*)
3. Students will wear clean, pressed lab jackets in every lab.
4. Students will conduct themselves in a professional manner.
5. Assigned microscope, drawer and study area should be kept clean and tidy at all times. Microscopes are assigned to each student and must be put away correctly by the student after each lab. Each time the instructor finds a microscope not put away correctly results in the loss of one point.
6. Students never leave the room without the consent of instructor.
7. No beverages or food are allowed in the lab room.
8. The students will report anything that is broken or missing.
9. The students will contact the instructor if there are any questions or problems of any sort.
10. The students should learn, enjoy and respect the profession of a veterinary technician.

Professional/Dress Expectations:

Students are expected to conduct themselves in a professional manner in attitude, dress and behavior. This course requirement prepares students for actual workplace skills and attitudes. Since laboratories simulate workplace situations, students are expected to dress in a manner that will promote respect and confidence from others. Students are required to wear appropriate dress to lab. Appropriate dress may be a professional, business-like dress or skirt and blouse; shirt and jeans or slacks; or a coordinated scrub top and scrub pants. A clean button-up or zip-up smock must be worn over clothing for all laboratory sections of VT 146, VT 241 and VT 281. If you do not show up to lab class with a scrub top/lab jacket you will be required to go home and retrieve one and you will be required to make up the time that you have missed. Due to safety considerations, it is highly recommended that students wear enclosed, oxford style shoes with a non-skid sole. All clothing must be clean and in a state of good repair. There will be no baseball caps, cowboy hats or dew rags worn during class. The instructor reserves the right to decide when clothing is inappropriate and may ask students not to wear particular outfits to lab again, or the instructor may dismiss a student to go home and change. Students are responsible for making up any missed laboratory work that is incurred by such a request to change clothing.

Syllabus Information Disclaimer

The instructor reserve the right to change any information contained in this document, when necessary, with adequate notice given to the students. Notice shall be given in the classroom during class. No other notice is required. It is the students' responsibility to stay current with any changes, modifications, adjustments or amendments that are made to this document.

Accommodations for Students with Disabilities

According to the Americans with Disabilities Act, it is the responsibility of each student with a disability to notify the college of his/her disability and to request accommodation. If a member of the class has a documented learning disability

or a physical disability and needs special accommodations, he/she should contact Student Support Services, which is located in the Student Union.

Equipment

Equipment used in this course is located in the Veterinary Technology laboratory. A list of all equipment available and required is published and may be found in the laboratory.

Bibliography

None

Recommended Resources

None

I have read and do understand the syllabus (VT 240 & VT 241) that I have received.

Student Signature: _____

Date: _____