Curriculum Details

Course Record ID

657

1. Entry Type

Active

Notes and Special Changes

2. Justification

This course is needed for the proposed AS in veterinary technology.

3. Course Alpha

ANSC

4. Course Number

258

5. Course Title (long)

Clinical Laboratory Techniques II

6. Course Title Short

Clin Lab Tech II

7. Course Credits

4

8. Course Credit Upper Range

0

Repeatable

Will default to 98
9. Course Description

A continuation of ANSC 151& 151L, this course provides students with additional instruction and hands-on experience with laboratory tests commonly used in veterinary practice. Topics include: 1) identification of internal parasites 2) performance and evaluation of microbiologic and serologic tests, 3) collection & evaluation of cytological samples 4) veterinary necropsy procedures. Included in this course is a review of the anatomy and physiology of major body systems and an overview of common diseases seen in veterinary practice. This course is intended for students entering veterinary assisting, veterinary technology or other animal-related fields (3 hours lecture, 3 hours laboratory).

10. Course Pre-Requisites

Grade of "C" or better in ANSC 151&151L and ANSC 152&152L

11. Course Co-Requisites

None

12. Course Recommended Preparation

13. Contact Hours (lecture, lab, lecture/lab)

3 hours lecture, 3 hours laboratory

14. Maximum Credits Towards an AA Degree

4

15. Department

Natural Sciences

16. Cross-Listing

17. Course Content

Quality Control Measures
Identification of Blood Parasites
- Dirofilaria sp.
- Mycoplasma sp.
- Anaplasma sp.
- Babesia sp.
- Trypanosoma sp.
- Eperythrozoan sp.
- Erlichia sp.

Copropathology
- Fecal Flotation
- Fecal Sedimentation
- Direct Smears
- Centrifugation with Flotation
- Perianal Adhesive Tape Procedure
- Identification of GI Parasites
- Nematodes
- Cestodes
- Trematodes
- Protozoa

Microbiologic Procedures
- Sample collection
- Bacterial culture & identification
- Sensitivity Tests
- Use of various media & reagents
- Mastitis Testing

Cytological Procedures
- Fine Needle Aspirates & Impression Smears
- Canine Vaginal Smear
- Bone Marrow Specimens
- Semen Evaluation
- Necropsy Procedures
- Humane Euthanasia
- The Post-Mortem Exam
- Sample Collection & Preservation
- Shipping Regulations
- Disposal of Animal Carcasses

18. Course Competencies

Skill: Properly package, handle and store specimens for laboratory analysis. Tasks: Prepare specimens for diagnostic analysis* Select and maintain laboratory equipment* Implement quality control measures*[GROUP] Ensure safety of patients, clients and staff* Decision-making abilities:
1. 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. 2. Given the characteristics of laboratory instruments and equipment, the veterinary technician will determine proper maintenance and quality control procedures necessary to ensure accurate results. Skill: Properly carry out analysis of laboratory specimens. Tasks: Perform serologic test (ELISA, slide/card agglutinations)* Identify blood parasites: Dirofilaria sp/Dipetalonema sp antigen kit*, direct*, filter, Knotts Hemotropic Mycoplasma sp* (formerly Haemobartonella sp) Anaplasma sp, Babesia sp, Trypanosoma sp, Eperythrozoan sp, Erlichia sp Perform diagnostics procedures for parasites: Antigen kit*, direct*, filter, Knotts floatation solution preparation fecal flotations* fecal sedimentation* direct smears* centrifugation with flotation* adhesive tape retrieval of pinworm ova Identify common parasitic forms: Nematodes, Cestodes, Trematodes, & Protozoa* Perform coprologic tests Perform microbiologic procedures/evaluations: collect representative samples* culture bacteria and perform sensitivity tests* identify common animal pathogens using commercially available media and reagents*[GROUP] collect milk samples and conduct mastitis testing (e.g., CMT, bacterial culture)*[GROUP] perform common biochemical tests*[GROUP] Perform cytologic evaluation assist in collecting, preparing and evaluating transudate, exudate and cytologic specimens (joint, cerebrospinal, airway, body cavity) perform fine needle tissue aspirates and impression smear preparation (differentiate benign vs. malignant) prepare and stain bone marrow specimens collect, prepare, and evaluate canine vaginal smears*[GROUP] evaluate semen understand timing and types of pregnancy testing perform a postmortem examination or dissection on non-preserved animal*[GROUP] collect samples, store and ship according to laboratory protocols*[GROUP] explain how to handle rabies suspects and samples safely* Decision-making abilities: 1. 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. 2. 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. 3. 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.

19. Assessments, Tasks, and Grading

ASSESSMENT TASKS AND GRADING EXAMINATIONS (200 points total-100 points each for each). The student will take two exams to demonstrate comprehension of information discussed in the lecture section of the course. Examinations may consist of multiple choice, short-answer, essay
and diagraming questions. QUIZZES (100 points total-10 points for each quiz). During the laboratory portion of the course, students will take a total of 10 quizzes to demonstrate knowledge of select laboratory procedures, practice identification of select internal parasites, and demonstrate correct interpretation of laboratory tests. LAB PRACTICUMS (200 points total- 100 points for each practicum). The student will complete two lab practicums during the laboratory portion of the course. Topics for lab practicums include: identification of select internal parasites, performance and interpretation of laboratory tests, equipment use and maintenance, and quality-control measures. COURSE TASK CHECKLIST (400 points total). Each student will complete a Course Task Checklist (CTC) to document proficiency with the performance and interpretation of essential laboratory tests and procedures. It is the student’s responsibility to bring their CTC to each course meeting. Upon successful demonstration of a required task or decision making ability, the course instructor will initial the appropriate box in the student’s CTC. Students must demonstrate proficiency at each essential skill or task (designated by an * ) in order to receive a passing grade in the course. METHOD OF GRADING: The assignment of points will be according to the following: Exams 200 points Quizzes 100 points Lab Practicums 200 points Course Task Checklist 500 points TOTAL 1,000 points GRADING SCALE: Total Points Percentage Points Grade 895-1000 90-100 A 795-894 80-89 B 695-794 70-79 C 595-693 60-69 D <595 0- 59 F

20. Auxiliary Materials and Content

Required materials include parasite slides, stains, microbiological supplies, etc. The majority of supplies have already been purchased using Perkins funds. Also required are: animal cytology samples (to be provided by student or shelter animals) and non-preserved cadavers for necropsy procedures. The latter will be purchased through biological supply companies.

21. Additional Activities outside of class and class time

None anticipated.

22. Special Costs connected to the course

Currently, there is no supplies budget allocated for vet tech or vet assisting classes. Supplies funds will be requested in the next departmental/program budget proposal to be submitted to PBC. In the mean time, students will need to purchase a supplies card (approximately 50-100$ per student) to pay for lab consumables.

23. What are the Student Learning Outcomes?

Upon successful completion of ANSC 258, the student should be able to demonstrate proficiency with the following: 1)Properly package, handle and store specimens for laboratory analysis. 2)Identify and describe the life cycle of select internal parasites of companion animals, livestock, & exotic species. 3)Perform serologic tests. 4)Collect, culture, and identify bacteria from animal tissues and perform sensitivity testing. 5)Collect and evaluate various cytological specimens including canine vaginal smears. 6)Perform a postmortem examination of a non-preserved animal.

24. How does the proposal connect to the college’s strategic plan?

The program objectives align to the following elements of the college's strategic plan: Outcome 4.1: Contribute to the development of a high-skilled workforce through the establishment of at least one new specific, career-focused degree, certificate or career pathway per year that leads to
employment in emerging fields.  

**Outcome 4.2:** Establish partnerships with employers to create internships and job placements.  

**Outcome 4.3:** Expand the curriculum that prepares students for critical workforce shortage areas.  

**Outcome 4.4:** Create internships and service learning opportunities in the community.  

**Outcome 4.5:** Promote the knowledge, skills, and opportunities that support current and emerging STEM fields and careers.  

**Outcome 4.6:** Increase the number of degrees and certificates awarded in STEM fields.

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**25. Describe the staff that will be needed**

This class will be taught by a licensed DVM. WCC currently has an adjunct veterinarian on staff and is requesting a full-time DVM to teach and coordinate AS in Vet Tech Courses.

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**26. Describe the facilities that will be needed, including special rooms**

This class can be taught in Imiloa 103.

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**27. Describe any other resources that will be needed**

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**28. How will the staff, facilities, and other resources for the course be secured?**

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**29. Certificates**

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**30. Connection to the AA degree**

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**31. Connection between the Course SLOs and the College’s General Education Outcomes**

Recognize and respond to the wonders and challenges of the natural environment, both biological and physical.

Use research and technology skills to access information from multiple sources; use critical thinking and problem-solving skills to evaluate and synthesize information to form conclusions, ideas, and opinions.

Enter and perform effectively in the work force.

Develop skills that improve personal well-being and enhance professional potential.

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**32. List any similar classes taught at outside of the UH system**

VETT 216- Vet Clinical Pathology III; San Juan College
33. List any similar classes taught at campuses in the UH System.

None

34. How, if at all, is the course intended to count in lieu of a course taught at a four-year campus.

It is not intended to count for courses taught on a 4-year campus.

35. How, if at all, is the course similar to upper-division courses in the UH System.

This course is intended for veterinary technicians. Most vet tech programs are taught by CCs and other 2-year campuses. This course is not similar to any courses taught at other UH campuses.

36. How does the course articulate with four-year programs (Gen Ed)?

None

37. List any articulations between this course and any four-year program.

Not appropriate.

End of Proposal