Curriculum Details

Proposed By

Proposed by: johnkaya

Course Record ID

765

Entry Type

Active

Date Created

October 29, 2012

Notes and Special Changes

Stakeholders Consulted

1. Justification

This course is needed for the A.S. in veterinary technology. In order to recieve AVMA accreditidation, our program needs to teach an anesthesiology and surgical nursing class.

2. Course Alpha

ANSC

3. Course Number

271L

4. Course Title (long)

Anesthesiology and Surgical Nursing for Veterinary Technicians Lab
5. Course Title Short
Anesth & Surg Assist VETT Lab

6. Course Credits
2

7. Course Credit Upper Range
0

Repeatable
Will default to 98 (this is how often someone can sign up for the course (not how many times they can apply it to a degree)

8. Course Description
This course will focus on the clinical skills necessary for safe and effective anesthesia and surgery of companion animal patients (dogs and cats) Skills such as intravenous catheter placement, proper endotracheal intubation, patient and surgical site preparation, and patient monitoring under general anesthesia will be stressed. The use and side effects of commonly used sedatives, analgesics and anesthetics will be covered. Postoperative procedures include patient monitoring and charting as well as client education for postoperative care.

9. Course Pre-Requisites
Admission in the Veterinary Technology program.

10. Course Co-Requisites
Co-registration in ANSC 271.

11. Course Recommended Preparation

12. Contact Hours (lecture, lab, lecture/lab)
6 hours laboratory

13. Department
Natural Sciences
14. Cross-Listing

15. Course Content

ANESTHESIA Preanesthetic Period:  
- Patient Evaluation  
- Selection of anesthetic protocols  
- Preanesthetic patient care  
- Intravenous catheterization  
  Preanesthetic agents  
  General Anesthesia (GA):  
  - Definition of GA  
  - Components of GA  
  - Safety  
  - Anesthetic stages & planes  
  - Induction techniques  
  - Endotracheal intubation  
  - Maintenance of anesthesia  
  - Patient monitoring  
  - Patient positioning  
  - Stages of recovery  
  - Anesthetic Agents & Techniques:  
    - Routes of administration  
    - Injectable anesthetics  
    - Inhalation anesthetics  
    - Postanesthetic agents  
  - Anesthetic Equipment:  
    - Endotracheal tubes  
    - Anesthetic machines  
    - Components of the anesthetic delivery system  
    - Vaporizers  
    - Operation of the anesthetic machine  
  - Care and use of anesthetic equipment  
  - Workplace Safety:  
    - Hazards of waste anesthetic gasses  
    - Compressed gasses  
    - Accidental exposure to injectable agents  
  - Anesthetic Problems & Emergencies:  
    - Reasons why problems occur  
    - Response to emergencies  
    - Types of emergency situations  
    - Problems in the recovery period  
  - Special Anesthetic Techniques:  
    - Local Anesthesia  
    - Controlled ventilation  
  - Neuromuscular blocking agents  
  - Analgesia:  
    - Principles of analgesia  
    - Pharmacologic analgesia  
    - Classes of analgesic drugs  
  - SURGICAL NURSING  
    - Preoperative considerations:  
      - Physical Examination  
      - Consent forms  
      - Administration of pre-op meds  
      - Placement of IV catheters  
      - Intubation  
      - Patient preparation  
      - Surgical site preparations  
      - Proper attire in surgical area  
      - Personal hygiene  
      - Surgical hand scrub  
      - Types of scrubs solutions  
      - Gowning & Gloving  
      - Cleaning the surgical area  
      - Asepsis  
      - Types of surgical instruments  
      - Surgical needles  
      - Suture materials  
    - Perioperative equipment  
    - Monitoring devices  
    - Power tools  
    - Surgical wound classification  
    - Use of perioperative antibiotics  
    - Intraoperative considerations:  
      - Body temperature  
      - Positioning  
      - Patient monitoring  
      - Analgesia  
      - Surgical wound classification  
      - Use of perioperative antibiotics  
      - Surgical attire  
      - Responsibilities of the surgical assistant  
    - Postoperative Considerations:  
      - Recovery from anesthesia  
      - Extubation  
      - Postoperative monitoring  
      - Anesthetic complications  
      - Surgery complications  
      - Post-op nursing care  
      - Post-op analgesia  
    - Maintenance of Surgical Area & Equipment  
    - Layout of the surgery suite  
    - Equipment cleaning  
    - Cleaning of the surgery room  
    - Types of disinfectants  
    - Rotating & restocking supplies  
    - Instrument Cleaning & Sanitation  
    - Basic cleaning procedures  
    - Pack wrapping  
    - Sterilization  
    - Specialty instrument cleaning  
    - Client Education for Postoperative Care  
    - Discharge instructions  
    - Postanesthesia instructions  
    - Postsurgical instructions

16. Course Competencies

SLO #1: Safely and effectively manage patients during all phases of anesthetic procedures. Tasks:  
1) Calculate dosages of appropriate anesthetic-related drugs  
2) Administer anesthetic-related drugs by injection, mask, induction chamber or endotracheal tube  
3) Place endotracheal tubes in patients when appropriate  
4) Utilize clinical signs and appropriate equipment to monitor patient status in all stages of
anesthetic procedures (e.g., esophageal stethoscope, Doppler, pulse oximeter)*
5) Evaluate patient and implement and evaluate pain management protocols
6) Recognize and respond appropriately to patients in compromised states 7) Perform
appropriate resuscitation procedures as needed 8) Complete controlled substance log

Decision-making abilities: Given the characteristics of the anesthetic patient and the
procedure being performed, the veterinary technician will work with the veterinarian
to: 1) Assess the patient’s risk status and determine appropriate anesthetic and
perianesthetic protocols to provide effective pain management and maximum
anesthetic safety and effectiveness. 2) Choose and utilize appropriate techniques and
equipment to accurately and effectively monitor the patient’s ongoing status before,
during and after anesthesia to provide for adequate anesthesia, analgesia and a safe
recovery.  
SLO #2: Safely and effectively select, operate and maintain anesthetic
delivery equipment and monitoring instruments. Task: Maintain and operate
anesthetic delivery and monitoring equipment, including the following: pulse
oximeter* esophageal stethoscope* electrocardiograph * anesthetic
machines* endotracheal tubes* resuscitation bag* scavenging systems* oxygen
sources* respiratory monitors* blood pressure monitoring devices* laryngoscopes*
ventilator defibrillator

Decision-making abilities: 1) Given the
characteristics of the anesthetic instruments and equipment being used, the
veterinary technician will recognize and respond appropriately to equipment
malfunctions or inappropriate equipment setup in order to ensure proper function and
provide maximum benefit to the patient. 2) Given the requirements of the anesthetic
protocol, the veterinary technician will select, evaluate and adjust equipment to
ensure proper function and provide maximum benefit to the patient. 
SLO #3: Understand and integrate all aspects of patient management for common surgical
procedures in companion animal species. Tasks: 1) Demonstrate understanding of
routine surgical procedures and related equipment, including surgeries in these
categories: ovariohysterectomy, cesarean section, orthopedic procedures
, orchietomy, tail docking, onychectomy, laparotomies, dystocias and prolapsed
organs. 2) Properly identify patients and surgical procedures 3) Conduct a thorough
patient assessment 4) Organize medical records/consent forms 5) Review pre-
operative evaluations 6) Evaluate current patient status 7) Prepare the surgical site
using aseptic technique. 8) Position patient for common procedures. 9) Provide
surgical assistance: 10) Maintain proper operating room conduct and asepsis 11) Assist
with care of exposed tissues and organs 12) Properly pass instruments and supplies
13) Operate and maintain suction and cautery machines 14) Understand the principles
of operation and maintenance of fiber optic equipment 15) Keep operative records
16) Perform basic suturing techniques 17) Coordinate anesthesia and pain
management with members of the surgical team 18) Provide post-operative care
including: pain management, fluid therapy, adequate nutrition, wound management,
bandaging, patient discharge instructions, and suture removal. Decision-making
abilities: Given the characteristics of the patient and the surgical procedure to be
performed, the veterinary technician will: 1) Use medical records and patient
identification methods to assure that the patient and scheduled procedures are
correct. 2) Obtain the patient’s vital signs, note any specific physical abnormalities,
ensure pre-surgical tests have been completed and report the patient assessment to
the veterinarian. 3) Identify the appropriate area of hair to be removed and select
appropriate methods to reduce microbial flora on the skin in the area of surgical site
in order to decrease the chance of surgical wound contamination. 4) Position the patient appropriately to provide maximum convenience for the surgeon and maximum safety and benefit for the patient. 5) Understand and utilize appropriate aseptic techniques to assist operative personnel in order to provide maximum safety and benefit to the patient. 6) Assure that anesthetic and post-operative pain management protocols are appropriate to provide maximum safety and benefit to the patient. 7) Understand and administer the appropriate methods of post-operative care to assure maximum safety and benefit to the patient.

SLO#4: Identify and provide appropriate instruments, supplies and environment to maintain asepsis during surgical procedures. Tasks: 1) Prepare surgical instruments and supplies 2) Prepare gowns, masks, gloves, and drapes 3) Operate and maintain autoclaves 4) Sterilize instruments and supplies using appropriate methods 5) Identify and know proper use for instruments* 6) Identify common suture materials, types, and sizes 7) Provide operating room sanitation and care* 8) Maintain proper operating room conduct and asepsis* 9) Perform post-surgical clean-up (e.g., equipment, instruments, room, proper disposal of hazardous medical waste)*

Decision-making abilities: Given the characteristics of the patient and the surgical procedure to be performed, the veterinary technician will properly select, wrap and sterilize appropriate instruments and supplies and prepare and maintain the surgical environment to ensure maximum safety and benefit to the patient.

17. Assessments, Tasks, and Grading

QUIZZES (100 points total-10 points for each quiz). The student will take ten quizzes to demonstrate knowledge and understanding of information presented in the lectures, clinical lab activities, and text readings. COURSE TASK CHECKLIST (400 points): Students will be required to demonstrate proficiency in all essential skills, tasks, and decision-making abilities. These will be assessed in clinical skills labs, exam and surgical portions of this course using a Course Task Checklist (CTC). This booklet will be given to students during the first week of the course. It is the students responsibility to always have their CTC with them at all times. Students who lose their CTC or behave in an unsafe manner will receive an F grade and be barred from attending future classes.

METHOD OF GRADING: The assignment of points will be according to the following: Quizzes 100 points Course Task Checklist 400 points TOTAL 500 points GRADING SCALE: Total Points Percentage Points Grade 500 90-100 A 395-445 80-89 B 345-395 70-79 C 295-345 60-69 D <295 0- 59 F

Grading Options

Will be set to Banner default

18. Auxiliary Materials and Content

Students will need access to the following equipment and supplies: 1) Anesthesia Machine 2) Surgical Instruments 3) Monitoring Equipment 4) Surgery Table 5) Surgical Gowns, Gloves, & masks 6) Anesthetics, drugs, & IV fluids This equipment is already in inventory at WCC. Students will also need access to companion animals
(cats and dogs) which will be provided by an animal shelter.

19. Additional Activities outside of class and class time

20. Special Costs connected to the course

Approximate costs for participation in this class is $150 per student (to cover costs of drugs, suture material, and other consumables). This will be recovered by requiring students to purchase a supplies card through the bookstore.

21. What are the Student Learning Outcomes?

- Safely and effectively manage patients during all phases of anesthetic procedures.
- Safely and effectively select, operate and maintain anesthetic delivery equipment and monitoring instruments.
- Understand and integrate all aspects of patient management for common surgical procedures in companion animal species.
- Identify and provide appropriate instruments, supplies and environment to maintain asepsis during surgical procedures.

22. Connection between the Course SLOs and the College's General Education Outcomes

23. 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.

24. Describe the staff that will be needed

This course will require a Veterinarian Instructor licensed in the state of Hawaii. It may also require a credentialed veterinary technician to assist with certain procedures.

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

This course will require access to a veterinary treatment room for patient prep. We
currently have a room in imiloa that should suffice for this (imiloa 103 or 104). Surgical procedures will require a special surgery room. The location of this facility is Magoon Laboratory at the University of Hawaii, Manoa campus.

26. Describe any other resources that will be needed

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

A full-time veterinarian and registered veterinary technician has been hired to coordinate and teach the bulk of this course. Existing adjunct veterinary faculty will also serve as instructors. The surgery space will be funded by facilities renovation funds, which are currently available.

28. Certificates

29. Connection to the AA degree

AADY

30. Maximum Credits Towards an AA Degree

2

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

San Juan College: VETT-214: Vet Anesth & Surg Asst III

32. List any similar classes taught at campuses in the UH System.

33. 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 a course on a 4-year campus.

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

It is not similar.
35. How does the course articulate with four-year programs (Gen Ed)?

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

End of Proposal