COURSE DESCRIPTION: In-depth application of surgical, obstetrical, and anesthesia techniques including identification and use of instruments and equipment.

COURSE PREREQUISITES: VTHT 1301, 1191(M), 2301, 2431, 1349

COURSE RATIONALE: This is an advanced application class. Application of pharmacology, math, and nursing skills are needed to prepare the student to function as a Licensed Veterinary Technician in clinical practice.

COURSE OBJECTIVES: Upon completion of the course the student will be able to:

1. Calculate dosages of appropriate anesthetic-related drugs
2. Administer peri-anesthetic drugs by appropriate routes.
3. Place endotracheal tubes in patients when appropriate
4. Utilize clinical signs and appropriate equipment to monitor patient status during anesthetic procedures. Be able to maintain and operate anesthetic delivery and monitoring equipment:
   - pulse oximeter
   - esophageal stethoscope
   - respiratory monitors
   - endotracheal tubes
   - laryngoscopes
   - blood pressure monitoring devices
   - anesthetic machines, including rebreathing systems, non-rebreathing systems, induction chambers and masks
5. Properly identify and position patients for surgical procedures.
6. Prepare surgical site using aseptic techniques
7. Evaluate, coordinate (w/ surgical team), and implement pain management protocols
8. Recognize and respond appropriately to patients in compromised states
9. Perform appropriate resuscitation procedures as needed (e.g., calculate and administer appropriate anesthetic antagonists and emergency drugs as directed)
10. Complete controlled substance log
11. Understand and integrate all aspects of patient management for common surgical procedures in a variety of animal species.
12. Provide proper operating room conduct, asepsis and post-op cleaning.
13. Patient assessment:
   - organize medical records/consent forms
   - review pre-operative evaluation
   - coordinate anesthesia
14. Prepare surgical instruments and supplies (including gowns, drapes and other materials).
15. Operate and maintain autoclaves
16. Provide surgical assistance:
   - demonstrate proper operating room conduct and asepsis
   - assist with care of exposed tissues and organs
   - properly pass instruments and supplies
   - operate and maintain suction and cautery machines
   - understand the principles of operation and maintenance of fiber optic equipment
   - keep operative records
   - perform basic suturing techniques
17. Sterilize instruments and supplies using appropriate methods
18. Provide post-operative care:
   - pain management
   - fluid therapy
   - adequate nutrition
   - wound management
   - bandaging
   - discharge instructions
   - suture removal
19. Identify common suture materials, types, and sizes
20. Identify and know proper use for instruments
21. Have knowledge of routine surgical procedures and related equipment, including surgeries in these categories:
   - ovariohysterectomy
   - onychectomy
   - tail docking
   - cesarean section
   - laparotomies
   - prolapsed organs
   - orthopedic procedures
- orchiectomy
- dystocia

22. Have participated in surgeries in these categories:
   - ovariohysterectomy – dog, cat
   - orchiectomy – dog, cat

**Dentistry**

1. Perform routine dental prophylaxis (manual and machine), and be able to provide client education regarding home dental care.

**DISCIPLINE/PROGRAM STUDENT LEARNING OUTCOMES:**

Upon completion of the *Associate of Applied Science Degree in Veterinary Technology*, the student will be able to:

1. Contribute to the efficient operation of the veterinary facility by:
   a. Acquiring and conveying information appropriately.
   b. Being able to carry out duties, staying within the legal boundaries and maintaining high ethical standards.
   c. Providing quality service to clients, patients, and the facility.

2. Calculate, dispense and administer medication in the correct amount and in the prescribed form to maximize therapeutic benefits and minimize adverse effects. The student will be able to differentiate between normal and abnormal responses to medications and communicate necessary information to the client. The student will be able to perform inventory control procedures proficiently.

3. Safely obtain subjective and objective data that will allow accurate evaluation of the patient. The student will be able to: 1) implement techniques to promote wellness, achieve maximum health benefits, and reduce injury and stress to the patient; and, 2) recognize normal from abnormal behavior patterns.

4. Understand and explain appropriate and inappropriate dietary components for various life stages and therapeutic regimens (e.g., therapeutic foods) in order to promote optimal health, enhance recovery and manage chronic disease conditions. The student will also explain nutritional recommendations to clients and reinforce owner compliance.

5. Recognize a patient’s dental health status and perform techniques, as prescribed by a veterinarian, appropriate to the species and its condition in order to promote and maintain dental health.

6. Work with the veterinarian to: 1) Assess patient’s risk to determine appropriate anesthetic and pain management protocols; 2) Choose and utilize appropriate techniques and equipment to monitor patient’s status; 3) Recognize and respond to equipment malfunctions to provide maximum benefit and ensure safety of patient and staff; 4) use medical records to assure patient and scheduled procedures are correct; 5) Obtain the patient’s vital signs, physical parameters to ensure pre-surgical tests and patient assessment are reported to the veterinarian.
7. Position patients correctly for maximum benefit for the surgeon and the patient; utilize appropriate aseptic techniques for patient and personnel; and, administer appropriate post-operative care to the patient.

8. Select, wrap and sterilize appropriate instruments and supplies and prepare and maintain the surgical environment to ensure maximum safety and benefit to the patient.

9. Prepare, handle and submit appropriate samples for diagnostic analysis; and be able to: 1) recognize accurate vs. erroneous results; 2) determine appropriate methods and carry out analytical procedures to provide accurate diagnostic information; and, 3) work with the veterinarian to determine if laboratory tests will be needed.

10. Accurately 1) prepare the imaging site and equipment; 2) position patients for the appropriate study; 3) properly use radiographic and darkroom equipment positioning, measuring, and using appropriate radiographic technique to produce a diagnostic image; 4) determine if image is diagnostic, and if not, be able to offer options to correct image to create a diagnostic radiograph to minimize repeat exposures; and, 5) exercise professional judgment to minimize risks to patient and personnel.

11. Describe the basic principles of animal research and understand the utilization of laboratory animals in animal research. The student will also have a working knowledge of federal, state, and local animal welfare regulations.

**SCANS Competencies**

In 1990, the U.S. Department of Labor established the Secretary’s Commission on Achieving Necessary Skills (SCANS) to examine the demands of the workplace and whether our nation’s students are capable of meeting those demands. The Commission determined that today’s jobs generally require competencies in the following areas:

- **Resources:** Identifies, organizes, plans and allocates resources
- **Interpersonal:** Works with others
- **Information:** Acquires and uses information
- **Systems:** Understands complex interrelationships
- **Technology:** Works with a variety of technologies

The Texas Higher Education Coordinating Board requires that all degree plans in institutions of higher education incorporate these competencies and identify to the student how these competencies are achieved in course objectives.

<table>
<thead>
<tr>
<th>VTHT 1341 COMPETENCE</th>
<th>EXAMPLE OF LEVEL</th>
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<tbody>
<tr>
<td>Resources</td>
<td>Identifies resources used in course and allocates time for studying.</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Shares experiences and knowledge with classmates, works as a member of a team for any assigned activities.</td>
</tr>
<tr>
<td>Information</td>
<td>Identifies medications appropriate for patient and surgical procedure, calculates correct dose, administers correct route and time to the correct patient.</td>
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</tr>
<tr>
<td>Systems</td>
<td>Identifies anesthesia system appropriate for the assigned patient to ensure patient safety.</td>
</tr>
<tr>
<td>Technology</td>
<td>Uses monitoring devices to track vital signs during the anesthesia/surgical procedure</td>
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<tr>
<td>Basic Skills</td>
<td>Reads assigned pages.</td>
</tr>
<tr>
<td>Thinking Skills</td>
<td>Identifies and prepares for tests, quizzes and research activities. Evaluates patients, systems and vitals.</td>
</tr>
<tr>
<td>Personal Qualities</td>
<td>Works as a team member for assigned activities. Asserts self and networks with classmates to accomplish the task of assisting DVM in surgery.</td>
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**TEXTBOOK:**

Small Animal Surgical Nursing – Skills and Concepts, Sara J. Busch

**INSTRUCTIONAL METHODOLOGY: Classroom and Online**

**GRADING SYSTEM:** The Veterinary Technology courses use the following scale for determination of final grades:
- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69
- F = below 60

A grade of 70% or above is required in both lecture and lab to pass this course.

**METHOD OF EVALUATION:**
- 65 % of your grade will be based on assignments, quizzes and laboratory
- 26 % on exams
- 9 % on Final

***NOTE: You must pass both the lab and lecture portion with a 70% or above to pass the class. If you have above a 70% in both, the grades will be combined for your final grade.

**Quizzes:** No make-up quizzes. No exception. If students are late or absent from the class when quiz is begins, they miss the quiz. Grades will be based on points earned.
Late Assignment Policy: Assignments are expected to be turned in on time. If for some reason you are not able to get it turned in on time you can submit the next business day for a 50% deduction, an additional 10% deduction for each day thereafter. The assignment can be submitted in person, faxed, or scanned and e-mailed to the instructor. If a student knows they will miss a class they can submit their assignment electronically for full credit the day it is due. For any other circumstances the student needs to contact the instructor.

Exam Policy: You are expected to be present for all exams. If you miss an exam, arrangements must be made up within a week of when it was given. Make up exams are usually an essay type of exam. If it is not taken by that time, you will receive a “0” for that exam. To take an exam at a time other than the class time in which it is given, the absence must be “excused” by the instructor. “Excused” absences include illness, death, and other unavoidable circumstances. Written evidence must be presented. ONLY ONE EXAM MAY BE MADE UP. If more than one exam is missed, you will receive a “0” on all other missed exams.

COURSE POLICIES:

Attendance/Class Participation
Regular and punctual class and laboratory attendance is expected of all students. If attendance or compliance with other course policies is unsatisfactory, the instructor may withdraw students from the class.

Withdrawal Policy
It is the responsibility of each student to ensure that his or her name is removed from the roll should he or she decides to withdraw from the class. The instructor does, however, reserve the right to drop a student should he or she feel it is necessary. If a student decides to withdraw, he or she should also verify that the withdrawal is submitted before the Final Withdrawal Date. The student is also strongly encouraged to retain their copy of the withdrawal form for their records.

State law permits students to withdraw from no more than six courses during their entire undergraduate career at Texas public colleges or universities. With certain exceptions, all course withdrawals automatically count towards this limit. Details regarding this policy can be found in the ACC college catalog.

Incompletes
An instructor may award a grade of “I” (Incomplete) if a student was unable to complete all of the objectives for the passing grade in a course. You will not be able to carry an incomplete beyond the final deadline for withdrawal in the next semester of the program.

Statement on Scholastic Dishonesty
A student attending ACC assumes responsibility for conduct compatible with the mission of the college as an educational institution. Students have the responsibility to submit coursework that is the result of their own thought, research, or self-expression. Students must follow all
instructions given by faculty or designated college representatives when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, and falsifying documents. Penalties for scholastic dishonesty will depend upon the nature of the violation and may range from lowering a grade on one assignment to an “F” in the course and/or expulsion from the college. See the Student Standards of Conduct and Disciplinary Process and other policies at http://www.austincc.edu/handbook

The complaints and grades dispute process can also be found at the above site and is located in your Veterinary Technology Program handbook at http://www.austincc.edu/health/vtht/handbook.php

Student Rights and Responsibilities
Students at the college have the rights accorded by the U.S. Constitution to freedom of speech, peaceful assembly, petition, and association. These rights carry with them the responsibility to accord the same rights to others in the college community and not to interfere with or disrupt the educational process. Opportunity for students to examine and question pertinent data and assumptions of a given discipline, guided by the evidence of scholarly research, is appropriate in a learning environment. This concept is accompanied by an equally demanding concept of responsibility on the part of the student. As willing partners in learning, students must comply with college rules and procedures.

Statement on Students with Disabilities
Each ACC campus offers support services for students with documented disabilities. Students with disabilities who need classroom, academic or other accommodations must request them through the Office for Student Accessibility Services and Assistive Technology. Students are encouraged to request accommodations when they register for courses or at least three weeks before the start of the semester, otherwise the provision of accommodations may be delayed.

Students who have received approval for accommodations from SAS for this course must provide the instructor with the ‘Notice of Approved Accommodations’ from SAS before accommodations will be provided. Arrangements for academic accommodations can only be made after the instructor receives the ‘Notice of Approved Accommodations’ from the student.

Students with approved accommodations are encouraged to submit the ‘Notice of Approved Accommodations’ to the instructor at the beginning of the semester because a reasonable amount of time may be needed to prepare and arrange for the accommodations. Additional information about the Student Accessibility Services and Assistive Technology is available at http://www.austincc.edu/support-and-services/services-for-students/student-accessibility-services-and-assistive-technology

Safety Statement
Austin Community College is committed to providing a safe and healthy environment for study and work. You are expected to learn and comply with ACC environmental, health and safety
procedures and agree to follow ACC safety policies. Additional information on these can be found at http://www.austincc.edu/ehs.

Because some health and safety circumstances are beyond our control, we ask that you become familiar with the Emergency Procedures poster and Campus Safety Plan map in each classroom. Additional information about emergency procedures and how to sign up for ACC Emergency Alerts to be notified in the event of a serious emergency can be found at http://www.austincc.edu/emergency/.

Please note, you are expected to conduct yourself professionally with respect and courtesy to all. Anyone who thoughtlessly or intentionally jeopardizes the health or safety of another individual will be dismissed from the day’s activity, may be withdrawn from the class, and/or barred from attending future activities.

Use of ACC email
All College e-mail communication to students will be sent solely to the student’s ACCmail account, with the expectation that such communications will be read in a timely fashion. ACC will send important information and will notify you of any college related emergencies using this account. Students should only expect to receive email communication from their instructor using this account. Likewise, students should use their ACCmail account when communicating with instructors and staff. Instructions for activating an ACCmail account can be found at http://www.austincc.edu/accmail/activation-and-login-assistance

For help setting up your ACCeID, ACC Gmail, or ACC Blackboard, see a Learning Lab Technician at any ACC Learning Lab.

Testing Center Policy
Under certain circumstances, an instructor may have students take an examination in a testing center. Students using the Academic Testing Center must govern themselves according to the Student Guide for Use of ACC Testing Centers and should read the entire guide before going to take the exam. To request an exam, one must have:

• ACC Photo ID
• Course Abbreviation (e.g., ENGL)
• Course Number (e.g., 1301)
• Course Synonym (e.g., 10123)
• Course Section (e.g., 005)
• Instructor's Name

Do NOT bring cell phones to the Testing Center. Having your cell phone in the testing room, regardless of whether it is on or off, will revoke your testing privileges for the remainder of the semester. ACC Testing Center policies can be found at http://www.austincc.edu/testctr/
**Student and Instructional Services**

ACC strives to provide exemplary support to its students and offers a broad variety of opportunities and services. Information on these services and support systems is available at:

[http://www.austincc.edu/s4/](http://www.austincc.edu/s4/)

Links to many student services and other information can be found at:
[http://www.austincc.edu/current-students](http://www.austincc.edu/current-students)

ACC Learning Labs provide free tutoring services to all ACC students currently enrolled in the course to be tutored. The tutor schedule for each Learning Lab may be found at:
**Course Outline / Calendar**

**Note:** Chapter exams over each of the first 4 chapters of Small Animal Surgical Nursing book and Chapter 5 of the Anesthesia book will need to be passed with a grade of 85% on or before the 4th week of the semester (Feb. 10, 2011), to participate in Surgery Labs! Surgery Labs are essential to successfully complete this class!

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic Area/Objective</th>
<th>Reading/Other Assignments</th>
<th>ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction to Anesthesia &amp; Surgery</td>
<td>AnA – Chp. 1</td>
<td>Mock Anesthesia, gown/pack wrapping, suturing</td>
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<td>SASN – Chp. 1 - 4</td>
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<tr>
<td>Week 2</td>
<td>Patient Prep &amp; Anesthetic Agents</td>
<td>AnA – Chp. 2 &amp; 3</td>
<td>Anesthesia machine – monitoring surgery room set up</td>
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<td>SASN – Chp. 5</td>
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<tr>
<td>Week 3</td>
<td>Anesthetic Equipment</td>
<td>AnA – Chp. 4</td>
<td>Anesthesia Lab</td>
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<td>SASN – Chp. 6</td>
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<tr>
<td>Week 4</td>
<td><strong>Exam #1</strong> Anesthetic monitoring</td>
<td>AnA – Chp. 5</td>
<td>Surgery Lab by assignment only</td>
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<td></td>
<td>SASN – Chp. 5</td>
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<tr>
<td>Week 5</td>
<td>Analgesia</td>
<td>AnA – Chp.7</td>
<td>Surgery Lab by assignment only</td>
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<td>SASN – Chp. 8</td>
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<tr>
<td>Week 6</td>
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<td></td>
<td>Surgery Lab by assignment only</td>
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<tr>
<td>Week 7</td>
<td>Workplace Safety</td>
<td>AnA – Chp. 13</td>
<td>Surgery Lab by assignment only</td>
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<td>SASN – Chp. 10</td>
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<tr>
<td>Week 8</td>
<td><strong>Exam #2</strong> Canine &amp; Feline Anes.</td>
<td>AnA – Chp. 8</td>
<td>Surgery Lab by assignment only</td>
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<td>SASN – Chp. 9</td>
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<td>Week 9</td>
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<td>Surgery Lab by assignment only</td>
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<tr>
<td>Week 10</td>
<td>Ruminant &amp; Swine Anesthesia</td>
<td>AnA – Chp.10</td>
<td>Surgery Lab by assignment only</td>
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<td>SASN – Chp. 7</td>
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<tr>
<td>Week 11</td>
<td><strong>Exam #3</strong></td>
<td></td>
<td>Surgery Lab by assignment only</td>
</tr>
<tr>
<td>Week 12</td>
<td>Anesthetic Emergencies</td>
<td>AnA – Chp. 12</td>
<td>Surgery Lab by assignment only</td>
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<td>SASN – Chp. 12</td>
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<tr>
<td>Week 13</td>
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<td>Surgery Lab by assignment only</td>
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<td>Week 14</td>
<td>Equine Anesthesia</td>
<td>AnA – Chp. 9</td>
<td>Surgery Lab by assignment only</td>
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<td>SASN – Chp. 11</td>
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<tr>
<td>Week 15</td>
<td><strong>Exam #4</strong> Review / catchup</td>
<td></td>
<td>Surgery Lab by assignment only</td>
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<tr>
<td>Week 16</td>
<td>Final Exam</td>
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<td>Practical Exam</td>
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<td>Week 17</td>
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VTHT 1341 – Anesthesia and Surgical Assistance

By signing below I declare that I have received a copy of the course syllabus for VTHT 1341 – Anesthesia and Surgical Assistance and have had a chance to review it and understand the contents of the syllabus. This is for the semester inclusive of the date below.

_________________________________________________  __________________
Student Signature        Date