**Document justifying the use of live animals at EFSC**

The three R’s (refinement, replacement, reduction) are an integral part of veterinary medicine and should be considered for veterinary technological education. Alternatives to the use of animals in training should be considered when possible. Certain skills are difficult to achieve on a model or computer simulation and currently must use animals or animal parts to achieve desired goals. Eastern Florida State College (EFSC) policy is to avoid the use of live animals when possible for invasive procedures when they are not medically necessary. EFSC’s Veterinary Technology department uses a combination of methods to achieve this goal.

**Replacement and Refinement** - Animal model training is used to increase student dexterity and performance prior to working with live animals in a laboratory setting. Models used include:

- CPR Resusci-Jerry - CPR, bandaging techniques, animal handling, and endotracheal intubation
- K-9 Intubation Trainer – endotracheal intubation
- Female Urinary Catheter Mannequin – urinary catheterization
- Squeekums – ear punching, rodent handling, venipuncture
- Koken Rat and Rabbit model – rodent and rabbit handling, venipuncture, gavage training
- U.C Davis Forelimb IV catheterization model – IV catheterization, venipuncture
- Dental models
- Various homemade models – suture model, surgical scrub model, stuffed animals, etc.

**Replacement and refinement** - Skeletons are used to practice various techniques including bandaging, dental prophylaxis, and handling.

**Replacement, reduction, refinement** - preserved and fresh cadavers are used to teach anatomy and certain invasive techniques such as chest tube placement, endotracheal intubation, stomach tube placement, intranasal catheterization, abdominocentesis and urinary catheterization. Sources of cadaver materials are researched carefully prior to purchase. Faculty have made videos of dissections for iTunesU. The University of Colorado canine dissection program is also recommended viewing for students.

**Refinement –**

- Surgical procedures such as ovariohysterectomies and orchietomies are performed by licensed veterinarians with student assistance under the supervision of veterinary technician faculty. Dental prophylaxes are all performed by students under the supervision of a licensed veterinarian and veterinary technician faculty. Faculty: student ratio is 1:8 in all live animal laboratories involving invasive techniques.
- Rodent handling laboratories – all procedures are performed at AAALAC certified locations or EFSC under the supervision of a licensed veterinarian and veterinary technician faculty. A technician for the facility is also present at each laboratory to ensure safe and humane animal treatment. Techniques are only performed on live animals after video training through the
AALAS library, model training, and demonstration of techniques in a live animal by a technician or veterinarian.

- large animal handling laboratories – all procedures are performed under the supervision of two licensed veterinarians and a veterinary technician on patients of the licensed veterinarian. Owner consent is obtained and the majority of treatments are therapeutic.

**Reduction** – Group demonstrations are used for mandated competencies (according to ACMA CVTEA guidelines) to complete skills when possible.

All laboratory courses in the Veterinary Technology program have current IACUC protocols in place and are reviewed annually by the college Institutional Animal Care and Use Committee (IACUC). EFSC is registered with the USDA.

**References:**

1. AVMA CVTEA Accreditation Manual Appendix I
3. [http://escholarship.org/uc/item/6f10b3fh](http://escholarship.org/uc/item/6f10b3fh)

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