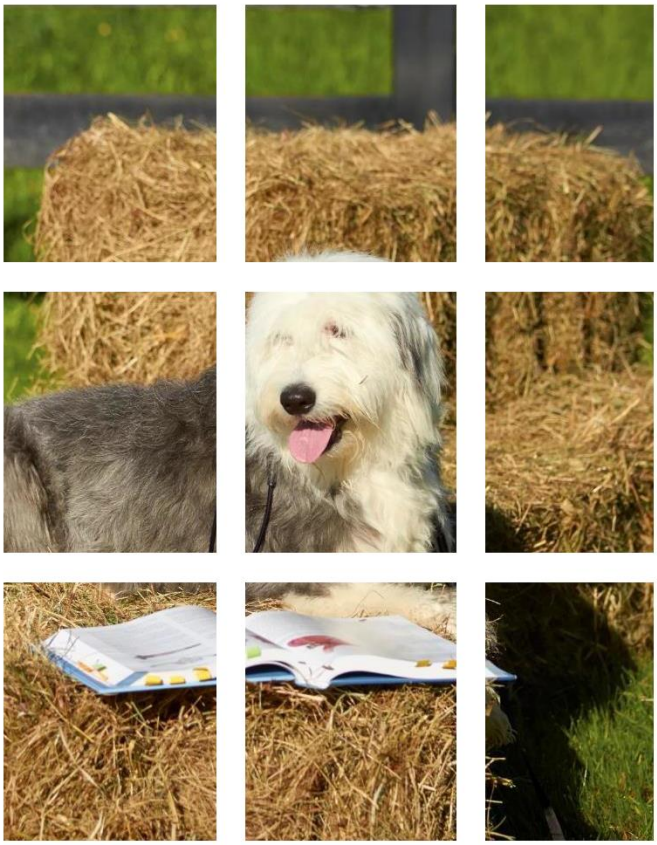
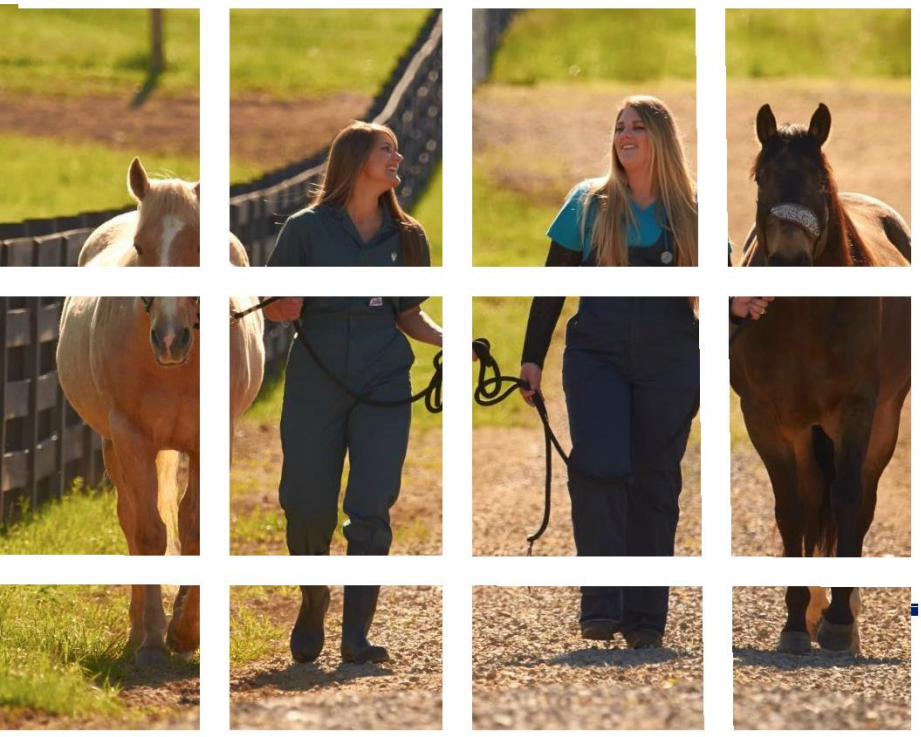
LMU
College of Veterinary Medicine
LINCOLN MEMORIAL UNIVERSITY

DeBusk Veterinary Teaching Center

POLICIES & PROCEDURES HANDBOOK





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The DeBusk Veterinary Teaching Center (DVTC) is considered to be part of the LMU campus. The additional information is provided given the unique functions provided onsite.

Welcome

Acronyms and Abbreviations

BTC	Bovine Teaching Center
CVM	College of Veterinary Medicine
DVTC	DeBusk Veterinary Teaching Center
ES	Equine Stables
ETC	Equine Teaching Center
SDS	Safety Data Sheets
PPE	Personal Protective Equipment
SACSC	Small Animal Clinical Skills Center
SC	Veterinary Student Center
VS	Veterinary Skills Center
VET	Veterinary Education and Technology Building

Phone Directory

Bovine Teaching Center	(423) 869-**6785**
Equine Teaching Center	(423) 869-**6786**
SACSC Lobby	(423) 869-**6535**
SACSC- Kennel Prep	(423) 869-**7422**
SACSC- Pharmacy	(423) 869- **7421**
SC – Clinical Research Space	(423) 869-**6780**
SC - Clinical Research Space	(423) 869-**6782**
Veterinary Skills Center	(423) 869-**6784**
Security	Desk: (423) 869-**6090** *Cell: (865) 585-**2048***

DVTC Campus Wide Policies

Photography

Photography or any use of recording devices (e.g., film or digital cameras, camera phones, sound recorder) is **strictly prohibited** in animal use areas, unless specifically approved in writing by the LMU IACUC and the Institutional Officer

Exceptions:

1. *When performed by government inspectors (e.g., USDA Veterinary Medical Officer).*
2. *When required by personnel authorized by the Institutional Officer to assist in clinical diagnosis of disease.*
3. *When the Institutional Officer has requested to document conditions of the animal facilities.*

Dress Code and Professional Conduct

General Lab Dress Code Guidelines

Non-slip, closed-toe shoes or boots are required for all labs. Closed toe shoes should cover the entire foot.

Exposed jewelry, which may present a snag risk or impediment to hygiene should be removed for all labs where live animals are present and for all surgical skills labs.

Students must refer to individual course syllabi for other specific dress code information. All individual course syllabi will meet minimum dress code requirements, but may actually require a more prescriptive attire.

Students should observe the LMU-CVM Student Handbook's guidelines on professional clothing.

Dress Code Designated per Building

In addition to adhering to general dress code policies as described in the LMU-CVM Student Handbook, please observe the following guidelines for each building at the DVTC.

Veterinary Student Center:

- Students who are transiting the VSC while going to or coming from labs located on the DVTC campus are permitted to wear clean attire specific to those labs. Scrubs and coveralls that have been worn around live animals or cadaver tissue should not be worn in areas where human food is stored or consumed.
- Upon return from laboratories, shoes/boots must be free of feces and/or other organic material prior to entering the building.

Veterinary Skills Center:

- When working with any specimens including but not limited to cadaver tissue, students are to wear a buttoned lab coat with either scrubs OR professional clothing. Non-slip, fully enclosed, closed-toe shoes are required.
- Students will follow all guidelines listed under *Laboratory Safety and Personal Protective Equipment (PPE)* in the course syllabus.

Equine Stables:

- When animals are present, students are to wear coveralls and non-slip rubber boots OR clean, professional clothing and appropriate closed-toed shoes that fully cover the foot.
- Boots/shoes should be clean when entering labs and cleaned at the end of each lab if soiled.
- When animals are not present, students are to wear clean, professional clothing and closed-toe shoes.
- The Equine Stables are not climate controlled. Be prepared for weather changes that can occur at any time.
- Students entering the stables while participating in a course or clinical skills laboratory will follow all guidelines listed in the course syllabus or posted on the course's online resource page (e.g. Canvas) with regard to clothing, s*afety, and Personal Protective Equipment (PPE)*.

Equine Teaching Center:

- When animals are present, students are to wear coveralls and non-slip rubber boots OR clean, professional clothing and boots.
- Boots/shoes should be clean when entering labs and cleaned at the end of each lab if soiled.
- When animals are not present, students are to wear clean, professional clothing and closed-toe shoes.
- Students entering the ETC while participating in a course or clinical skills laboratory will follow all guidelines listed in the course syllabus or posted on the course's online resource page (e.g. Canvas) with regard to clothing, s*afety, and Personal Protective Equipment (PPE)*.

Bovine Teaching Center:

- When animals are present, students are to wear coveralls and rubber boots. Boots should be clean when entering lab and must be cleaned at the end of each lab.
- When animals are not present, students are to wear clean, professional clothing and closed-toe shoes.
- Students entering the BTC while participating in a course or clinical skills laboratory will follow all guidelines listed in the course syllabus or posted on the course's online resource page (e.g. Canvas) with regard to clothing, s*afety, and Personal Protective Equipment (PPE)*.

Small Animal Clinical Skills Center:

For Lecture:

- Students are to wear clothing that meets Student Handbook guidelines.

For Lab:

- In all labs, students are to wear either scrubs or professional attire. Additionally, students are to wear a buttoned lab coat and closed-toe shoes.
- Students entering the SACSC while participating in a course or clinical skills laboratory will follow all guidelines listed in the course syllabus or posted onthe course's online resource page (e.g. Canvas) with regard to clothing, s*afety, and Personal Protective Equipment (PPE)*.

If students are uncertain about what clothing to wear to lab, they are encouraged to adhere to more stringent guidelines (e.g. scrubs with a lab coat). Scrubs and coveralls that have been worn around live animals or cadaver tissue should not be worn in areas where human food is stored or consumed.

For Surgery:

- Clean, washable (not leather), closed-toed shoes will be worn in surgery. Students will enter the building in their street shoes, then change into their clean shoes. After completing surgery, students will change back into street shoes before leaving the building.
- Surgical scrubs (Only Green in color) will be worn in the OR by students, and will be worn in the Procedures room under a lab coat. Lab coats will be buttoned over scrubs at all times. Students will change into scrubs inside of the building and change out of them before leaving. If it is necessary to

  walk between buildings at the DVTC, scrubs may be worn under a lab coat, but street shoes will be worn (remove clean shoes before walking in the parking lot).

Veterinary Education and Technology Building:

For Lecture:

- Students are to wear clothing that meets Student Handbook guidelines.

For Lab:

- In all labs, students are to wear either scrubs or professional attire. Additionally, students are to wear a buttoned lab coat and closed-toe shoes.
- Students entering the SACSC while participating in a course or clinical skills laboratory will follow all guidelines listed in the course syllabus or posted onthe course's online resource page (e.g. Canvas) with regard to clothing, s*afety, and Personal Protective Equipment (PPE)*.

If students are uncertain about what clothing to wear to lab, they are encouraged to adhere to more stringent guidelines (e.g. scrubs with a lab coat). Scrubs and coveralls that have been worn around live animals or cadaver tissue should not be worn in areas where human food is stored or consumed.

For Surgery:

- Clean, washable (not leather), closed-toed shoes will be worn in surgery. Students will enter the building in their street shoes, then change into their clean shoes. After completing surgery, students will change back into street shoes before leaving the building.
- Surgical scrubs (Only Green in color) will be worn in the OR by students, and will be worn in the Procedures room under a lab coat. Lab coats will be buttoned over scrubs at all times. Students will change into scrubs inside of the building and change out of them before leaving. If it is necessary to

  walk between buildings at the DVTC, scrubs may be worn under a lab coat, but street shoes will be worn (remove clean shoes before walking in the parking lot).

Transportation and Parking

The DVTC is LMU property and follows all parking and transportation regulations set forth by LMU.

Emergency and Evacuation Procedures

Fire Evacuation Plan

Staff

In an instance of an evacuation order, students, faculty and staff will:

1. systematically clear their floor,
2. exit to the RALLY POINT, and
3. check in with on-site Administrator and the University Police/Security.

The RALLY POINT for the Veterinary Student Center and Veterinary Skills Center is the grassy area directly across parking lot on the south side of the buildings.

The RALLY POINT for the Small Animal Clinical Skills Center is the grassy area at the west end of the parking lot.

The RALLY POINT for the Bovine Teaching Center and Equine teaching Center and Equine Stable is the grassy area to the East of the Small Animal Clinical Skills Center.

The RALLY POINT for the Veterinary Education and Technology is the center grass island in front of the VET building parking lot facing Highway 58.

Every room must be checked, in a systematic manner, as we want NO ONE left behind. **Evacuees are NOT to get in cars and leave as vehicle traffic will interfere with emergency vehicles.**

Drills are intended to be a minimal disruption. The more time it takes to sweep the building, the longer the disruption. In event that a test or quiz is being given at the time of an event, flexibility to create an alternative may be necessary. In the event of a drill, all is to be dropped immediately and every one must leave the building, even in the middle of a test or quiz.

In laboratories, students and faculty should pull electrical cords and shut off gas immediately in their immediate vicinity and exit. Designated personnel will shut off the oxygen lines to the Small Animal Clinical Skills building.

Patient safety is always a critical issue. In the event that a patient in the SA Clinical Skills Center is under anesthesia or recovering from anesthesia/surgery, the primary clinician will be informed of the fire drill prior to sounding the alarm, and an appropriate alternative course of action will be prescribed.

Tornado Emergency Plan

Please see LMU Community Standards for details.

Visitor Policy

Campus tours must be scheduled in advance through the Office of Admissions or the DVTC Site Coordinator. Unannounced visitor may be turned away or referred to the Harrogate Campus at any time.

All campus visitors are required to check in with the receptionist, in the lobby of the Small Animal Clinical Skills Center.

For safety and security reasons, visitors are not permitted in the Veterinary Skills, Bovine or Equine Teaching Centers, or Small Animal Clinical Skills buildings unless on an officially guided tour. Visitors are not permitted to handle, take pictures, or come in contact with the animals at the DVTC. Visitors are permitted in the Student Center as long as they have checked-in with the receptionist in the Small Animal Clinical Skills Center. All exceptions must be approved by and scheduled with the CVM and visitors must be accompanied by LMU-CVM personnel.

Locker Policy

All lockers within the Richard A. Gillespie College of Veterinary Medicine (LMU-CVM) are the property of the CVM and are subject to applicable University and College policies. LMU reserves the right to alter polices governing the use of lockers with appropriate notice.

The LMU-CVM reserves the right to search any locker, upon reasonable suspicion, for prohibited or illegally possessed substances or objects, in instances where locker procedures are being abused, or in the case of an emergency situation.

Students are only allowed to use the locker assigned to them at the beginning of school year. It is the student's responsibility to keep their assigned locker clean and in good condition. Students should not write or mark in or on the locker. Students are not permitted to affix items to the interior or exterior of their lockers. Students must report any problems to the LMU-CVM. Students may be assessed a repair charge for any damage that they cause to the locker.

Students should not store valuables in their lockers. LMU-CVM cannot be held responsible for lost, stolen, or damaged property.

Lockers must be cleaned out at the end of the school year, if a student is taking a leave of absence or withdrawing from the program, or if a student is no longer taking classes at the DVTC. For any locker not cleaned out, the locker lock will be cut and contents of the locker disposed of. LMU-CVM will not be held responsible for items, including the lock, left behind by the student.

Comment Box

Students have the opportunity to offer suggestions, comments, and complaints, anonymously if they wish, regarding compliance of the college with the Standards of Accreditation. The comment boxes are located in the Student Lounge areas of the Veterinary Student Center and the Small Animal Clinical Skills Building.

Facilities

Room Reservations

Please contact the DVTC Site Coordinator to facilitate reservations of rooms at the DVTC. Please provide one-week notice for all facilities requests.

Reservations are based on a first come first serve basis. LMU-CVM reserves the right to make changes to requests as needed.

The following is a list of rooms allowed for reservation.

- Veterinary Student Center Room 100 (Classroom; seats 56; food and drinks are allowed, no open containers, AV/TV with laptop hook-up)
- Veterinary Student Center Room 109 (Student Break Room; food and drinks are allowed)
- Veterinary Student Center Room 111 (Conference Room; seats 10; food and drinks are allowed, no open containers)
- Veterinary Student Center Room 121 (Student Lounge; food and drinks are allowed)
- Veterinary Skills Center 100 (Teaching Laboratory; food and drinks are prohibited)
- Equine Teaching Center 103 (Conference Room; seats 16; food and drinks are prohibited)
- Bovine Teaching Center 103 (Conference Room; seats 16; food and drinks are prohibited)
- Small Animal Clinical Skills Center 140 (Classroom; seats 150; food and drinks are allowed)
- Small Animal Clinical Skills Center 144 (Conference Room; seats 16; food and drinks are allowed)
- Small Animal Clinical Skills Center 149 (Student Lounge; seats 30; food and drinks are allowed)

Study rooms reservation policy can be found on the Student Affairs Canvas organization page.

Health and Safety

Biosecurity Measures

The LMU-CVM Animal Infectious Disease Control Plan and Biosecurity Procedures are intended to address contagious disease threats as they are encountered in this institution and to reduce the risk of nosocomial and zoonotic illness.

The document summarizes the plans and procedures to be used in the prevention and control of infectious diseases at LMU-CVM and the DVTC, and provides official policies regarding control of infectious diseases. All personnel working in for LMU-CVM at the DVTC will be trained and will follow all procedures and policies listed in the document. It is the responsibility of all DVTC Personnel (including students and volunteers) to recognize infectious disease risks at the DVTC, and to correct or report breaches in infection control procedures. Specific questions concerning the Animal Infectious Disease Control Plan and Biosecurity Procedures document LMU-CVM Biosecurity Committee. The document will be reviewed at least annually and modified as needed; updates will be posted on the LMU-CVM Web Page. The Animal Infectious Disease Control Plan and Biosecurity Procedures document is currently located with SOPs under the LMU IACUC documents. It may be accessed as follows:

- Log on to MyLMU
- Under "My Team Sites", click 'College of Veterinary Medicine'.
- Under "IACUC", click 'LMU Standard Operating Procedures'.

The LMU-CVM Animal Infectious Disease Control Plan and Biosecurity Procedures will be reviewed at least annually and as part of new employee training.

Personal Protective Actions and Equipment

Hand hygiene: Wash hands before and after each patient encounter and after contact with feces, body fluids, vomitus, exudates, or articles contaminated by these substances. Wash hands before eating, drinking, or smoking; after using the toilet; after cleaning animal cages or animal-care areas; and whenever hands are visibly soiled. Alcohol-based rubs may be used if hands are not visibly soiled, but hand washing with soap and running water is preferred. Keep fingernails short. Do not wear artificial nails or hand jewelry when handling animals. Keep hand- washing supplies stocked at all times.

Correct hand washing procedure:

- Wet hands with running water
- Place soap in palms
- Rub hands together to make a lather
- Scrub hands thoroughly for 20 seconds
- Rinse soap off hands
- Dry hands with disposable towel

- Turn off faucet using the disposable towel to avoid hand contact

Correct use of hand rubs:

- Place alcohol-based hand rub in palms
- Apply to all surfaces of hands
- Rub hands together until dry

Use of gloves and sleeves: Gloves are not necessary when examining or handling healthy animals. Wear gloves or sleeves when touching feces, body fluids, vomitus, exudates, and non- intact skin. Wear gloves for dentistry, resuscitations, necropsies, and obstetrical procedures; when cleaning cages, litter boxes, and contaminated environmental surfaces and equipment; when handling dirty laundry; when handling diagnostic specimens (e.g., urine, feces, aspirates, or swabs); and when handling an animal with a suspected infectious disease. Change gloves between examination of individual animals or animal groups (e.g., a litter of puppies) and between dirty and clean procedures performed on the same patient. Gloves should be removed promptly and disposed of after use. Disposable gloves should not be washed and reused. Hands should be washed immediately after glove removal.

Facial protection: Wear facial protection whenever splashes or sprays are likely to occur. Use a face shield, or goggles worn with a surgical mask. Wear facial protection for the following procedures: lancing abscesses, flushing wounds, dentistry, nebulization, suctioning, lavage, obstetrical procedures, and necropsies.

Protective outerwear: Wear a protective outer garment such as a lab coat, smock, non-sterile gown, or coveralls when attending animals and when conducting cleaning chores. Outerwear should be changed and laundered daily. These should also be changed whenever soiled, after handling an animal with a known or suspected infectious disease, after working in an isolation room, and after performing a necropsy or other high-risk procedure. Impermeable outwear should be worn during obstetric procedures and necropsies and whenever substantial splashes or large quantities of body fluids may be encountered. Shoes or boots should have thick soles and closed toes and be impermeable to water and easily cleaned. Disposable shoe covers should be worn when heavy quantities of infectious materials are present or expected. Promptly remove and dispose of shoe covers and booties when leaving contaminated work areas. Clean shoes or boots between farm visits. Keep clean outer garments available at all times.

Animal-related injury prevention: Take precautions to prevent bites and other injuries. Identify aggressive animals and alert clinic staff. Use physical restraints, muzzles, bite-resistant gloves, and sedation or anesthesia in accordance with practice policies. Plan an escape route when handling large animals. Do not rely on owners or untrained staff for animal restraint. Routine incident report procedures will be followed in case an injury occurs.

Protective Actions during Veterinary Procedures

Examination of animals: Wear appropriate protective outerwear, and wash hands before and after examination of individual animals or animal groups (e.g., a litter of puppies). Wear facial protection if a zoonotic respiratory tract disease is suspected. Potentially infectious animals will be examined in a designated examination room and remain there until diagnostic procedures and treatments have been performed.

Injections, venipuncture, and aspiration procedures: Wear gloves while performing venipuncture on animals suspected of having an infectious disease and when performing soft tissue aspirations.

Needlestick injury prevention: Do not bend needles, pass an uncapped needle to another person, or walk around with uncapped needles. Do not remove an uncapped needle from the syringe by hand or place a needle cap in the mouth. Do not recap needles except in instances when required as part of a medical procedure or protocol. Dispose of all sharps in designated containers. After injection of live vaccines or aspiration of body fluids, dispose of used syringes with needles attached in a sharps container. Otherwise, remove the needle by use of forceps or the needle removal device on the sharps container, and throw the syringe away in the trash. Do not transfer sharps from one container to another. Replace sharps containers before they are completely full.

Environmental Infection Control

Isolation of infectious animals: Animals with a contagious or zoonotic disease will be housed in isolation as soon as possible. Clearly mark the room or cage to indicate the patient's status and describe additional precautions. Keep only the equipment needed for the care and treatment of the patient in the isolation room, including dedicated cleaning supplies. Disassemble and thoroughly clean and disinfect any equipment that must be taken out of the room. Discard gloves after use. Leave reusable personal protective equipment (e.g., gown, mask) in the isolation room. Clean and disinfect or discard protective equipment between patients and whenever contaminated by body fluids. Place potentially contaminated materials in a bag before removal from the isolation room. Limit access to the isolation room. Keep a sign-in log of all people having contact with an animal in isolation. Follow current SOP found in binder outside of isolations spaces.

Cleaning and disinfection of equipment and environmental surfaces: Wear gloves when cleaning and disinfecting. Wash hands afterwards. First, clean surfaces and equipment to remove organic matter, and then use a disinfectant according to manufacturer's instructions. Clean and disinfect animal cages, toys, and food and water bowls between uses and whenever visibly soiled. Clean litter boxes once a day. Use the checklist for each area of the facility (e.g., waiting room, examination rooms, treatment area, and kennels) that specifies the frequency of cleaning, disinfection procedures, products to be used, and staff responsible.

Handling laundry: Wear gloves when handling soiled laundry. Wash animal bedding and other laundry with standard laundry detergent and completely machine dry. Use separate storage and transport bins for clean and dirty laundry.

Decontamination and spill response: Immediately spray spills or splashes of body fluids, vomitus, feces, or other potentially infectious substance with disinfectant and contain it with absorbent material (e.g., paper towels, sawdust, or cat litter). Put on gloves and protective outerwear (including shoe covers if the spill is large and may be stepped in) before beginning the clean-up. Pick up the material, seal it in a leak-proof plastic bag, and clean and disinfect the area. Keep clients, patients, and employees away from the spill area until disinfection is completed.

Rodent and vector control: Seal entry portals, eliminate clutter and sources of standing water, keep animal food in closed metal or thick plastic covered containers, and dispose of food waste properly to keep the facility free of rodents, mosquitoes, and other arthropods.

Other environmental controls: There are designated areas for eating, drinking, smoking, application of make-up, and similar activities. These activities should not occur in animal-care areas or in the laboratory. Do not keep food or drink for human consumption in the same refrigerator as food for animals, biologics, or laboratory specimens. Dishes for human use should be washed and stored away from animal-care and animal food preparation areas.

Sharps Management Protocol

Needle sticks can potentially serve as a portal of injury for pathogens and can result in serious injury. It is important that appropriate sharps management is performed to ensure the safety and protection of faculty, staff and students.

1. Sharps Disposal
    a. All sharps should be disposed of using an approved sharps container. Sharps containers are located in all areas that sharps could be used on live animals or models. If a syringe with a needle attached is used for the aspiration of body fluids or the injection of vaccinations that contain live organisms it should be safely placed in the sharps container in its entirety. In some cases the needle may be separated from the syringe and disposed of using the sharps container. Sharps should not be transferred from one sharps container to another and a sharps container should not be overfilled.
2. Uncapped needles
    a. An uncapped needle should never be removed from a syringe by hand. If it is necessary to do so forceps may be used. A person should not be walking around others with an uncapped needle and it should not be passed to another person. Needles should never be uncapped by mouth.
3. Recapping needles
    a. Small Animal
        i. Recapping needles should be avoided but sometimes may be necessary. If a needle must be recapped a 1-handed scoop technique may be used.

1. Place the cap on a horizontal surface such as an exam table.
2. Hold the syringe with the attached needle in 1 hand.
3. Use the needle to scoop up the cap without using the other hand.
4. Secure the cap by pushing it against a hard surface.

b. Large Animal
    i. When possible the needle should be recapped using the 1 handed method described above. On occasion a needle may need to be recapped when a flat surface nor a sharps container is available. If this occurs forceps may be used to replace the cap on the needle. Both hands may be used but extreme caution should be taken to prevent injury and the needle and syringe should be kept in a safe place until they can be disposed of properly.

Personal Protective Policies

Equipment

Gloves, goggles, glasses, respirators, hearing protective devices, masks, face shields, eye wash stations, and first aid kits are available and easily accessible throughout the DVTC facilities. LMU keeps a central file of Safety Data Sheets (SDS) online that is accessible anytime on the MyLMU site, under the Menu, Resources, Safety & Facilities Management, Quick Links (on the left), MSDS Online.The SDS list of necessary PPE that is required for any chemical or other product that may be used. Any PPE that appears to be worn or defective should be reported immediately.

Safety glasses and direct vented goggles

Safety glasses and direct vented goggles may be appropriate PPE where mechanical injury is the primary concern. These items to not provide adequate biological protection where there is significant zoonotic disease risk.

Indirect vented Goggles

Indirect vented goggles provide substantial protection from dust, particulates and liquid splashes. Unvented goggles generally fog easily and may be difficult to use effectively. Many brands and styles are available with highly variable costs. Goggles may impact the fit of respirators and vice-versa. If using goggles and respirators together in a strenuous environment, the fit of both products may easily be compromised.

Face shields

Face shields are often used in clinical or laboratory settings for splash protection. Face shields do not provide protection from dust and particulates and are not an effective form of PPE in the typical agricultural setting.

Hearing Conservation

Students of the LMU-CVM will be in contact with loud noises on a daily basis. Areas that could potentially contain loud noises include, but are not limited to, BTC, ETC, VET and SACSC. If a student feels that their hearing is at any time in danger they will be provided with ear plugs. **The canine kennels at the DVTC are designated hearing protection areas. Hearing protection will be worn by all personnel entering these areas when dogs are present.**

Personal Hygiene

Although PPE provides a significant amount of protection, effective personal hygiene such as hand washing should be implemented as a key form of protection against infection and disease transmission. Hand washing should be performed frequently using antiseptic soap and warm water. Gloves should be changed and hands should be sanitized between each patient and/or specimen. Fingernails should be kept short and artificial nails should not be worn.

Hazard warning signs

Signage is in place at the DVTC for the safety of students and employees. Signs are located across the campus and include but are not limited to Wet Floor signs, Biohazards on the VSC cooler and freezer, OSHA labels, and Animal Safety signs.

General Laboratory Safety

Centrifuge

The majority of all centrifuge accidents result from user error. To avoid injury, workers should follow the manufacturer's operating instructions for each make and model of centrifuge that they use.

Follow these steps for the safe operation of centrifuges:

- Ensure that centrifuge bowls and tubes are dry.
- Ensure that the spindle is clean.
- Use matched sets of tubes, buckets and other equipment.
- Always use safety centrifuge cups to contain potential spills and prevent aerosols.
- Inspect tubes or containers for cracks or flaws before using them.
- Avoid overfilling tubes or other containers (e.g., in fixed angle rotors, centrifugal force may drive the solution up the side of the tube or container wall).
- Ensure that the rotor is properly seated on the drive shaft.
- Make sure that tubes or containers are properly balanced in the rotor.
- Only check O-rings on the rotor if you are properly trained.
- Apply vacuum grease in accord with the manufacturer's guidelines.
- Do not exceed the rotor's maximum run speed.
- Close the centrifuge lid during operation.
- Make sure that the centrifuge is operating normally before leaving the area.
- Make sure that the rotor has come to a complete stop before opening the lid.

Compressed Gas in Cylinders

Many industrial and laboratory operations require the use of compressed gases for a variety of different operations.

Compressed gases present a unique hazard. Depending on the particular gas, there is a potential for simultaneous exposure to both mechanical and chemical hazards.

Gases may be:

- Flammable or combustible
- Explosive
- Corrosive
- Poisonous
- Inert
- or a combination of hazards

If the gas is flammable, flash points lower than room temperature, compounded by high rates of diffusion, present a danger of fire or explosion. Additional hazards of reactivity and toxicity of the gas, as well as asphyxiation, can be caused by high concentrations of even "harmless" gases such as nitrogen.

Storage

Gas cylinders must be secured at all times to prevent tipping

Cylinders may be attached to a bench top, individually to the wall, placed in a holding cage, or have a non-tip base attached. Chains or sturdy straps may be used to secure them.

Transportation

The cylinders that contain compressed gases are primarily shipping containers and should not be subjected to rough handling or abuse. Such misuse can seriously weaken the cylinder and render it unfit for further use or transform it into a rocket having sufficient thrust to drive it through masonry walls.

1. To protect the valve during transportation, the cover cap should be screwed on hand tight and remain on until the cylinder is in place and ready for use.
2. Cylinders should never be rolled or dragged.
3. When moving large cylinders, they should be strapped to a properly designed wheeled cart to ensure stability.
4. Only one cylinder should be handled (moved) at a time.

Cryogenic liquids

Cryogenic liquids *(also known as cryogens)* are gases at normal temperatures and pressures. However, at low temperatures, they are in their liquid state. These liquids are extremely cold and have boiling points less than -150°C (- 238°F). Even the vapors and gases released from cryogenic liquids are very cold. They often condense the moisture in air, creating a highly visible fog. Different cryogens become liquids under different conditions of temperature and pressure, but all have two properties in common; extremely cold and small amounts of liquid can expand into very large volumes of gas. Everyone who works with cryogenic liquids must be aware of their hazards and know how to work safely with them.

Types of Cryogenic Liquids

Each cryogenic liquid has its own specific properties but most cryogenic liquids can be placed into one of three groups:

- Inert Gases: Inert gases do not react chemically to any great extent. They do not burn or support combustion. Examples of this group are nitrogen, helium, neon, argon and krypton.
- Flammable Gases: Some cryogenic liquids produce a gas that can burn in air. The most common examples are hydrogen, methane, carbon monoxide, and liquefied natural gas.
- Oxygen: Many materials considered as non-combustible can burn in the presence of liquid oxygen. Organic materials can react explosively with liquid oxygen. The hazards and handling precautions of liquid oxygen must therefore be considered separately from other cryogenic liquids.

Personal Protective Equipment to be worn

- Be sure to work in a well ventilated area to prevent oxygen deficient atmospheres under 19.5% oxygen.
- Wear safety shoes when handling containers along with long sleeve shirts and trousers without cuffs.
- ALWAYS wear a full face shield and splash resistant safety goggles. Contact lenses should not be worn.
- Wear a lab coat and an apron when dispensing liquid nitrogen.
- Wear insulated or leather gloves when handling liquid nitrogen or large, cold objects.

Handling Cryogenics Liquids

- Never allow any unprotected part of the body to touch non-insulated pipes or vessels which contain cryogenic fluids. Tissue damage that results is similar to frostbite or thermal burns.
- The extremely cold metal will cause flesh to stick fast and tear when one attempts to withdraw from it.
- Use a suitable hand truck for container movement.
- Do not drop, tip, or roll containers on their sides. Do not remove or interchange connections. If user experiences any difficulty operating container valve or with container connections discontinue use and contact supplier. Use the proper connection. DO NOT USE ADAPTERS.
- Many substances become brittle and may shatter when cold, sending pieces of the material flying. Avoid common glass and large, solid plastics.

Storing Cryogenic Liquids

- Store and use with adequate ventilation.
- Do not store in a confined space.
- Cryogenic containers are equipped with pressure relief devices to control internal pressure. Under normal conditions these containers will periodically vent product. Do not plug, remove, or tamper with pressure relief device for this could cause an explosion.
- Containers shall be handled and stored in an upright position.
- Small quantities of liquid nitrogen can be stored in Dewar bottles. Dewar bottles are hollow-walled glass-lined containers which provide excellent insulation.

Hazards of Cryogenic Liquids

- Extreme Cold Hazard: Cryogenic liquids and their associated cold vapors and gases can produce effects on the skin similar to a thermal burn. Brief exposures that would not affect skin on the face or hands can damage delicate tissues such as the eyes. Prolonged exposure of the skin or contact with cold surfaces can cause frostbite. The skin appears waxy yellow. There is no initial pain, but there is intense pain when frozen tissue thaws. Unprotected skin can stick to metal that is cooled by cryogenic liquids. The skin can then tear when pulled away. Even non-metallic materials are dangerous to touch at low temperatures. Prolonged breathing of extremely cold air may damage the lungs.
- Asphyxiation Hazard: When cryogenic liquids form a gas, the gas is very cold and usually heavier than air. This cold, heavy gas does not disperse very well and can accumulate near the floor. Even if the gas is non-toxic, it displaces air. When there is not enough air or oxygen, asphyxiation and death can occur. Oxygen deficiency is a serious hazard in enclosed or confined spaces. Small amounts of liquid can evaporate into very large volumes of gas.
- Toxic Hazards: Each gas can cause specific health effects. Refer to the MSDS for information about the toxic hazards of a particular cryogen.
- Fire Hazard: Flammable gases such as hydrogen, methane, carbon monoxide, and liquefied natural gas can burn or explode. Hydrogen is particularly hazardous. It forms flammable mixtures with air over a wide range of concentration. It is also very easily ignited. Oxygen-Enriched Air: When transferring liquid nitrogen through uninsulated metal pipes, the air surrounding a cryogen containment system can condense. Nitrogen, which has a lower boiling point than oxygen, will evaporate first. This evaporation can leave an oxygen-enriched condensate on the surface that can increase the flammability or combustibility of materials near the system, creating potentially explosive conditions. Equipment containing cryogenic fluids must be kept clear of combustible materials in order to minimize the fire hazard potential.
- Liquid Oxygen Hazard: Liquid oxygen contains 4,000 times more oxygen by volume than normal air. Materials that are usually considered non-combustible (carbon and stainless steels, cast iron, aluminum, zinc, Teflon (PTFE), etc.) may burn in the presence of liquid oxygen. Many organic materials can react explosively, especially if a flammable mixture is produced. Clothing splashed or soaked with liquid oxygen can remain highly flammable for hours.
- Embrittlement: Rubber, plastic, and carbon steel are some examples of materials that can be can become brittle and break with very little stress applied to them. Try to avoid using these materials when working with cryogenic. If these materials are used, perform an inspection before use.

General Use, Maintenance and Care of Equipment

Students may use a selection of the provided equipment but it will be maintained by technicians.

Hazardous Material Definitions

- **Ignitable-** Contains materials that are easily combustible or flammable
- Corrosive includes acids and bases or mixtures having a pH less than or equal to 2 or greater than or equal to 12.5, and materials that burn the skin or dissolve metals.
- **Reactive-** Includes materials that are unstable or undergo rapid or violent chemical reaction when exposed to air, water or other material, generate toxic gases or vapors when mixed with water or when exposed to pH conditions between 2 and 12.5 (as in the case with cyanide or sulfide containing materials), forms potentially explosive mixtures with water, are capable of detonation or explosive reaction when heated or subjected to shock.

- **Toxic-** Includes heavy metal compounds such as: arsenic, barium, cadmium, chromium, lead, mercury, silver, selenium, and more.
- **Pathogenic, Carcinogenic, Infectious, and Etiologic agents-** Includes any material that directly cause health problems such as, "a viable microorganism, or its toxin, which causes or may cause disease in humans or animals". Infectious waste includes blood borne pathogens.
- **Sharps-** Defined as any non-contaminated sharp object that can penetrate the skin, including, but not limited to: broken capillary tubes and glass pipettes, blades from power tools, glass microscope slides and cover plates, and hypodermic and non- hypodermic needles.

All information is not included in this handbook. To access more detailed information about different chemicals that may be used at the LMU-DVTC you can access the MSDS online or in the buildings at different designated areas.

Hazardous Waste Disposal

Laboratory waste generated by student learning activities will be disposed in appropriate waste bins once labs are completed and properly cleaned. Expired chemicals will be disposed of properly by trained personnel that are familiar with safety procedures including chemicals both hazardous and non-hazardous.

Storage

Chemicals and other laboratory materials being stored in any building on the DVTC site will be routinely inspected for proper storage and inventory control. Chemicals should be individually assessed to ensure safe storage of multiple items. Proper storage information can be obtained from the Material Safety Data Sheets (MSDS) provided in each building. MSDS information can also be located online however, hard copies are available due to the uncertainty of internet access at all times.

Radiation Safety

Radiology safety procedures must be followed by all students and personnel in diagnostic radiology.

1. X-ray machines are to be used for diagnostic procedures on animals only, no human use.
2. X-ray equipment must be used under the express consent and/or supervision of a faculty or staff member.
3. Pregnant individuals that have declared they are pregnant to the appropriate faculty or staff member should take appropriate exposure risk reduction measures based on sonsultation with their licensed healthcare providers and legal regulations. Pregnant individuals are encouraged to reach out to the University Title IX office to help manage any specific restrictions made by their health care provider.
4. Individuals under 18 years of age are not permitted to operate or be within the restricted area during the operation or radiation generating equipment.
5. X-ray equipment on site includes a stationary x-ray unit in SA129, a mobile x-ray unit housed in the Equine Teaching Center, and a dental x-ray unit housed in SA129.
6. Restricted areas
    - All areas identified with “Caution X-ray Radiation” signs. Unauthorized personnel must not be present in area during the use of radiation generating equipment. Only personnel (student or faculty/staff) required to take image is allowed in the room where images are being taken.
7. Utilize appropriate personal protective equipment (PPE) for operation and assisting
    - Lead lined apron
    - Lead lined gloves
    - Lead eye glasses
    - Lead lined thyroid protector
8. Avoid primary beam at all times
9. PPE is located in the X-ray viewing room and personal dosimeters (monitoring badges) are located in the hallway outside SA129. PPE and dosimeter badges are also located in the Equine Teaching Center for the mobile unit.
10. Ionizing radiation which is generated when taking and x-ray, can be harmful to your health if precautions are not taken.

11. When operating radiological equipment, users must remain at a minimum of 6 feet away from the primary beam if possible. An exception is the plate holder who must be a minimum of four feet from the primary beam when using the mobile unit.
12. Authorized personnel should share responsibility of animal restraint so the same individual is not always in the area of greatest risk for exposure
    - Consider chemical restraint to minimize need to hold animal during exposure
    - Use mechanical holding devices when possible (sand bags, etc.)
    - Personnel should avoid direct scatter and **not** be in the beam
13. Radiation exposure monitored with personal monitoring badge
    - **Required** for all authorized personnel operating or assisting with radiation generating equipment
    - Worn on collar or near the hip outside of protective clothing (PPE)
    - Reports of exposure level will be provided to individuals yearly
14. Dental X-ray Unit
    - "All stationary, mobile or portable x-ray systems used for veterinary work shall be provided with either a two meter (6.5 feet) high protective barrier for operator protection during exposures, or shall be provided with means to allow the operator to be at least 2.7 meters (nine feet) from the tube housing assembly during exposures."

Animal Policies

Use of Animals at the DVTC

The policy of the Lincoln Memorial University-College of Veterinary Medicine (LMU-CVM) is to safeguard and promote the health and well-being of all animals used in teaching and research activities. LMU-CVM abides by the published standards of care in the *Guide for the Care and Use of Laboratory Animals*, NRC 2011, 8th Edition; the *Animal Welfare Act* as implemented by Title 9, Code of Federal Regulations (CFR) of the US; and the *AVMA Guidelines on Euthanasia* (2020). The care and welfare of all animals used in the veterinary education curriculum, whether for the education of students or for conducting research or testing, is overseen by the LMU Institutional Animal Care and Use Committee (IACUC). Protocols for any use of animals at CVM must be reviewed and approved by IACUC prior to implementation.

The veterinary education curricula are designed to provide students opportunities to master the technical skills they will need to function as skilled health care professionals, while doing so in a manner that does not harm animals. In the case of surgical techniques, instrument handling, knot tying, gowning and gloving, draping and maintaining sterile surgical fields, are taught in a serial fashion using a combination of inanimate and dynamic models and computer simulations over several semesters in our Clinical & Professional Skills laboratory. The rationale for this preemptive approach is to build student confidence and expertise before they enter a surgical suite for the first time. The capstone surgical exercise for the pre-clinical curriculum is the canine ovariohysterectomy (spay) procedure. Following spay procedures, patients are returned to their owners, whether the owner is a private individual or a shelter facility.

Small animals

In order to reduce risks related to aggressive animals or animals suspected of having an infectious disease, these animals need to be handled with specific precautions. Animals with known or suspected aggressive behavior will be handled is separate examination rooms under faculty or technician supervision and as appropriate using different means of restraint (i.e. muzzle, snare etc.).

Animals with respiratory or gastrointestinal signs or with a history of or exposure to a known infectious agent will either not be admitted (depending on LMU policy) or will immediately be placed in one of the isolation rooms or in a dedicated examination room.

Large animals

Horses

Students must work in pairs to collect horses from the paddocks.

The LMU-CVM maintains a herd of horses used for instruction at the DeBusk Veterinary teaching center. These horses were adopted into the herd following specific guidelines and are maintained on a current vaccination and deworming schedule and tested annually for EIA, as reflected in the medical records system. Physical examinations are performed on a regular basis by LMU-CVM personnel and any horse suspicious of having an infectious disease will be isolated following LMU-CVM isolation protocols.

Horses will be examined either in the equine teaching building in one of the 16 stocks that are available or in the equine teaching barn. Horses known or suspected of having an infectious disease (i.e. respiratory, gastro-intestinal, neurologic) will not be examined as part of student instruction, with the exception of students completing the fourth year Large Animal Clinical Rotation.

Horses known to be difficult to handle will only be handled under direct supervision and using appropriate physical or chemical restraint.

Cattle

The LMU-CVM maintains a herd of cattle used for instruction at the DVTC. These cattle were adopted into the herd following specific guidelines and are maintained on a current vaccination and deworming schedule, reflected in the medical records system. Physical examinations are performed on a regular basis by LMU-CVM personnel and any cattle suspicious of having an infectious disease will be isolated following LMU-CVM isolation protocols.

Cattle will be examined in the bovine teaching building. Cattle known or suspected of having an infectious disease (i.e. respiratory, gastro-intestinal, neurologic) will not be examined as part of regular student instruction, with the exception of students completing the fourth year Large Animal Clinical Rotation.

Examination of animals

Healthy animals

All veterinary personnel and veterinary students need to wash their hands between examinations of individual animals (i.e. dogs, cats, horses, groups of cattle…). Veterinary personnel and veterinary students must wear appropriate clothing during animal examinations.

Animals with potential infectious diseases

These animals will be examined in a dedicated examination room or isolation room. Animals will remain isolated until initial diagnostic procedures and treatments have been performed. The isolation or examination room will remain out of service until proper cleaning and disinfection of the room and all the equipment and material in the room has been performed. Contact with these animals will need to be limited to essential personnel. Personnel will need to follow appropriate personal protective equipment and hygiene protocols to enter and exit isolation rooms.

Patient Care Guidelines

Patient Welfare Deficiency Policy

The faculty of the LMU-CVM programs work hard to ensure ample hands-on experience for students using live animals. Students have a responsibility to provide daily enrichment, feedings, medical, and any additional care to the live animals we house within our college. To ensure the optimal respect, care, and health of these animals we have developed Patient Care

Guidelines to hold each student accountable during their time at LMU-CVM. The Patient Care Guidelines are made available to students at the beginning of each semester that outlines what constitutes expectations of care and patient neglect. If a student does not properly care for their patient, a patient welfare deficiency will be recorded.

Welfare deficiencies will be documented as part of a points system. If a student accumulates >2 points in a semester, they will meet with the Professional Conduct Committee.

All Patient Welfare Deficiencies will be documented in writing. Depending on the number and severity of these deficiencies, the student will be required to meet with any or all of the following LMU representatives:

- The Clinical Skills Course Directors and/or the Attending Veterinarian
- The Professional Conduct Committee

The following are examples of potential level 1-4 patient welfare deficiencies: .

Level 1 Animal Patient Welfare Deficiency:

- Failure to notify Animal Care Supervisor and kennel team at

least 30 mins prior to tardy or absence from a shift

- Incomplete/missing information on charting (ex: Instinct, vet checks)
- Charting must be completed within 30 minutes of the end of the kennel shift
    - Failure to:

Work cooperatively as a team member

Focus on patient during the shift (e.g. on cell phone during shift)

Approve shift exchange by Animal Care Staff or CVM Faculty

Complete animal care duties

Complete all charting (patient and cleaning)

Each Level 1 deficiency will be considered as 1 point towards the outcomes described in section 6 of this document.

Level 2 Animal Patient Welfare Deficiency:

Failure to:

- Provide and ensure proper care and daily needs of an animal. This includes but is not limited to proper medication administration, feeding, ensuring hygiene of kennel facility, enrichment etc.
- Promptly report a sick, injured or aggressive animal to Animal Care Supervisor
- Use appropriate mechanical restraint (harness fit, muzzles, closure of kennel door, etc.)
- Place both required leads (slip lead and harness) for walking the dog.
- Place the additional clip on the kennel door.

Each Level 2 charge will be considered as 2 points toward any of the outcomes described in section 6 of this document.

Level 4 Animal Patient Welfare Deficiency:

- Abuse, such as physically striking, rough handling, or tormenting a caged animal, in any way or endangering the animal's life
- Fabrication of any aspect of kennel care including medical records

Each Level 4 charge will be considered as 4 points and require a meeting with the Professional Conduct Committee (see PCC).

By enrolling in a DVM or VMT program, the student agrees to all conditions stated in the Patient Care Guidelines.

Rabies Policy

Policy Number (VMT:03:01)

Rabies Policy for the Richard A. Gillespie College of Veterinary Medicine Veterinary Medical Technology Program

I. PURPOSE

The purpose of this rabies policy (hereinafter the "Policy") is to decrease the chance of exposure to rabies, a fatal zoonotic disease, for personnel and students enrolled in the Richard A. Gillespie College of Veterinary Medicine Veterinary Medical Technology Program (hereinafter the "Program") at Lincoln Memorial University (LMU).

II. POLICY STATEMENT

It is the policy of the Program to require pre-exposure rabies vaccination or evidence of a protective rabies titer within the past twenty-four (24) months for all students enrolled in the Program and personnel associated with the Program. Students who have a medical contraindication or religious exemption that prevents them from receiving the rabies vaccine must understand their increased risk of contracting rabies. The rabies mitigation policy lays out the steps that the Program has put in place to help decrease this risk for all faculty and students enrolled in the program.

III. DEFINITIONS

Fully vaccinated animal - Animals that have been held for twenty-eight (28) days after their first rabies vaccine to allow for seroconversion according to the Center for Disease Control (CDC).
Animals previously vaccinated against rabies are considered fully vaccinated immediately after their booster vaccine is given if their booster vaccine is given on schedule. Fully vaccinated human – Humans are considered fully vaccinated after they have completed their initial rabies vaccine series (either 2-dose or 3-dose series) within the past two (2) years or have an adequate rabies titer drawn within the past two (2) years.

IV. AUDIENCE

This policy is written for the Program including LMU personnel, students, and shareholders.

V. COMPLIANCE

Compliance will be ensured by oversight from the Veterinary Medical Technology Program Director and Program Personnel.

VI. ROLES AND RESPONSIBILITIES

Animal Care Supervisor: Staff member who oversees care of canine, feline, and laboratory animals and is the direct point of contact for students on kennel shifts regarding animal care.
Veterinary Medical Technology Program Director: Professor that oversees the Program, including supervision of staff and faculty.
Program Personnel: Any staff or faculty employed by LMU with primary duties associated with the Program.

VII. APPLICABLE STATUTES, REGULATIONS, AND RELATED POLICIES (IF ANY)

Information for guidelines regarding zoonotic disease and rabies protection: www.cdc.gov/rabies/index.html and *What is Rabies?*, World Health Organization, https://www.who.int/rabies/about/en/.

VIII. STANDARDS

CVTEA Accreditation Policies and Procedures: Appendix A

Rabies exposure is an occupational hazard for all members of the veterinary healthcare team, and preventive measures are necessary to protect personnel. Rabies in humans can be prevented either by eliminating exposures to rabid animals or by providing exposed persons with prompt local treatment of wounds combined with appropriate post-exposure prophylaxis (including both passive antibody administration and active immunization with cell culture vaccines). According to the U.S. Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP), pre-exposure vaccination should be offered to persons in high-risk groups, such as veterinarians and their staff.

IX. COMPONENTS OF RABIES POLICY

1. Vaccination of mammals (excluding rodent and rabbits):
    a. All mammals (cats, dogs, cattle, and horses) used for instruction under IACUC and USDA protocol are vaccinated against rabies by an USDA-accredited veterinarian upon intake into an LMU facility. Records for rabies vaccination will be held for each animal within their medical record in the LMU-CVM electronic medical record database. Any student who is not fully vaccinated against rabies will not handle an animal until the animal is considered fully vaccinated (see Section III for definitions).
    b. Any client owned mammals (e.g., sheep, dogs, cats, or ferrets) that are used in laboratory classes will be required to provide proof of a current rabies vaccine prior to use in a laboratory setting. Any client-owned mammal that has not been fully vaccinated will not be permitted to participate in laboratory classes (see Section III for definitions).
2. Vaccination of humans
    a. Pre-exposure rabies vaccination or evidence of a protective rabies titer within the past twenty-four (24) months is required for all students enrolled in the Program and personnel associated with the Program.
3. Hold/seroconversion period post rabies vaccination
    a. Upon intake into an LMU facility, rabies vaccination is administered to any unvaccinated animal or animal with unknown vaccination status and documented in each animal's medical record. Animals are held for twenty-eight (28) days before they are considered fully vaccinated.
    b. Once at LMU, only fully vaccinated students or students with proof of a protective titer within the past twenty-four (24) months and fully vaccinated Program personnel will care for any animals that are not fully vaccinated against rabies (see Section III for definitions).
4. Hold/observation period for vaccinated animals exposed to rabies
    a. Mammals (dogs, cats, horses, and cattle) that are exposed to rabies but current on rabies vaccination shall be given a booster vaccination immediately and are held for forty-five (45) days for observation.
    b. Only fully vaccinated employees and students or employees and students with proof of a protective titer within the past twenty-four (24) months will care for any animals not fully vaccinated against rabies on a post-exposure rabies hold (see Section III for definitions).
5. Communication to external parties:
    a. The memorandum of understanding (MOU) signed by Student Practicum Sites states, "All students will be required to obtain Tetanus and Rabies immunizations prior to admission to the clinical educational program and shall otherwise meet those health standards required by UNIVERSITY and SITE, unless student has an Immunization Waiver on file." If any student is not fully vaccinated against rabies, the externship site is required to only allow them to handle animals that are fully vaccinated (see Section III for definitions). LMU will not be liable for any delays this may cause in a student's progression through the program.
6. Communication to internal parties:
    a. Comprehensive information about rabies is provided to the University President for review. The rabies mitigation policy, including the student vaccination policy, is reviewed and approved by the General Counsel, the Executive Dean of the LMU-CVM, and President of the University.
7. Communication to students:
    a. All students are informed that rabies is a fatal disease and is a serious risk to their health prior to working with any live mammals. Students will also be taught how rabies is transmitted, about the importance of the pre-exposure rabies vaccination, and the steps that should be taken after possible exposure to an animal infected with rabies.

b. Excerpt from LMU-CVM Student Handbook detailing the rabies vaccine policy: "All students admitted to the Lincoln Memorial University Veterinary Medical Technology Program must be immunized against Rabies and Tetanus (or be exempted by a physician). This form must be completed by the attending physician as verification of coverage. Students will not be permitted to take any courses that require hands-on training with animals until this form is completed and returned to the Veterinary Medical Technology Program." The handbook also includes a "Rabies Notification" statement which details the risk of rabies as a fatal disease.
c. During a first semester course (VMT100), students are provided a paper copy of the rabies mitigation policy and the policy is discussed in class. At the end of class, students sign and submit their acknowledgement that they understand that rabies is a fatal disease and is a risk to their health and that they reviewed the rabies mitigation policy.
d. Contact tracing is performed for any students who worked with an unvaccinated animal in the event the animal shows signs of or is diagnosed with rabies. Any student who is not fully vaccinated against rabies will not handle an animal until the animal is considered fully vaccinated (see Section III for definitions).
e. All client-owned animals must show proof of rabies vaccination and be fully vaccinated. All client-owned animals used for curriculum delivery will be monitored by owners for ten (10) days after student contact. At the end of the ten (10) days, program personnel will call and confirm that the animals used in laboratory are not having any symptoms of rabies. Any animal exhibiting signs of rabies will be examined by a veterinarian and testing of the animal will be required if the veterinarian examining the patient and the public health veterinarian deem it necessary.

8. Comprehensive risk assessment considering local rabies prevalence.
   a. Before each school year begins, an audit of the confirmed rabies cases for the area is completed. This information is available through https://www.cdc.gov/rabies/location/usa/surveillance/index.html. In addition, an audit of confirmed rabies cases is completed for any area where a student completes an externship. This information is provided to the students before they begin live animal laboratories each academic year and before their practicum begins. Any student exposed to rabies will have immediate wound care if needed and then will be referred to their doctor to begin post-exposure prophylaxis which may include passive antibody administration and/or active immunization.
9. Mitigating human exposure
   a. All students and personnel will have appropriate PPE available during live animal and necropsy laboratories. When working with any unvaccinated animal, fully vaccinated students and personnel will be instructed to use gloves, masks, eye protection, long sleeves, pants, and closed-toed shoes. Any student who is not fully vaccinated against rabies will not handle an animal until the animal is considered fully vaccinated (see Section III for definitions).
   b. Any student or personnel exposed to a known or suspected case of rabies will have immediate wound care and will be referred to their doctor to begin post-exposure prophylaxis, which may include passive antibody administration and/or active immunization.

X. CONTACT INFORMATION

For more information regarding this policy, please contact Dr. Jay Miles, VMT program director at jay.miles02@lmunet.edu.

XI. DOCUMENT HISTORY

Effective: 2/2022; Revised 7/2023; Revised 7/2024; Revised 5/2025

Rabies Exposure Mitigation Policy

Policy Number (VMT:02:01)

Rabies Exposure Mitigation Policy for the Richard A. Gillespie College of Veterinary Medicine Veterinary Medical Technology Program

1. **Purpose**

The purpose of this rabies mitigation policy (hereinafter the "Policy") is to decrease the chance of exposure to rabies, a fatal zoonotic disease, for Program personnel and students enrolled in the Richard A. Gillespie College of Veterinary Medicine Veterinary Medical Technology Program (hereinafter the "Program") at Lincoln Memorial University (LMU).

2. **Policy Statement**

It is the policy of the Program to require pre-exposure rabies vaccination or evidence of a protective rabies titer within the past twenty-four (24) months for all students enrolled in the Program and personnel associated with the Program. Students who have a medical contraindication or religious exemption that prevents them from receiving the rabies vaccine must understand their increased risk of contracting rabies. The rabies mitigation policy lays out the steps that the Program has put in place to help decrease this risk for all faculty and students enrolled in the Program.

III. Definitions

Fully vaccinated animal - Animals that have been held for twenty-eight (28) days after their first rabies vaccine to allow for seroconversion according to the Center for Disease Control (CDC). Animals previously vaccinated against rabies are considered fully vaccinated immediately after their booster vaccine is given if their booster vaccine is given on schedule.

Fully vaccinated human – Humans are considered fully vaccinated after they have completed their initial rabies vaccine series (either 2-dose or 3-dose series) within the past two (2) years or have an adequate rabies titer drawn within the past two (2) years.

4. **Audience**

This policy is written for the Program including LMU personnel, students, and shareholders.

5. **Compliance**

Compliance will be ensured by oversight from the Veterinary Medical Technology Program Director and Program Personnel.

6. **Roles and Responsibilities**

Animal Care Supervisor: Staff member who oversees care of canine, feline, and laboratory animals. and is the direct point of contact for students on kennel shifts regarding animal care.

Clinical Veterinary Technician: Staff member, who is a credentialed veterinary technician, and works closely with the other technical staff in the Program to provide instruction and assist in teaching animal management.

Clinical Activities Coordinator: Staff member, who is a credentialed veterinary technician, and works closely with the other technical staff in the Program to provide instruction and assist in teaching animal management.

Veterinary Medical Technology Program Director: Professor that oversees the Program, including supervision of staff and faculty.

Program Personnel: Any staff or faculty employed by LMU with primary duties associated with the Program.

VII. Applicable Statutes, Regulations, and Related Policies (If any)

Information for guidelines regarding zoonotic disease and rabies protection: www.cdc.gov/rabies/index.html and *What is Rabies?*, World Health Organization, https://www.who.int/rabies/about/en/.

VIII. Standards

CVTEA Accreditation Policies and Procedures: Appendix A

Rabies in humans can be prevented either by eliminating exposures to rabid animals or by providing exposed persons with prompt local treatment of wounds combined with appropriate postexposure prophylaxis (including both passive antibody administration and active immunization with cell culture vaccines). In addition, pre-exposure vaccination should be offered to persons in high-risk groups, such as veterinarians, animal handlers, and certain laboratory workers. Student safety must be considered above financial challenges. All components of the rabies mitigation plan are executed and enforced.

Components of rabies mitigation plan:

1. Vaccination of mammals (excluding rodent and rabbits);
2. Vaccination of humans
3. Hold/seroconversion period post rabies vaccination (per CDC- twenty-eight (28) days);
4. Hold/seroconversion period for vaccinated animals exposed to rabies (per CDC- forty-five (45) days);
5. Communication to external parties;
6. Communication to internal parties;
7. Communication to students; and
8. Comprehensive risk assessment taking into account local rabies prevalence.

IX. Components of Rabies Mitigation Plan

1. Vaccination of mammals (excluding rodent and rabbits):
    1. All mammals (cats, dogs, cattle, and horses) used for instruction under IACUC and USDA protocol are vaccinated against rabies by an USDA-accredited veterinarian upon intake into an LMU facility. Records for rabies vaccination will be held for each animal within their medical record in the LMU-CVM electronic medical record database. Any student who is not fully vaccinated against rabies will not handle an animal until the animal is considered fully vaccinated (see Section III for definitions).
    2. Any client owned mammals (e.g., sheep, dogs, cats, or ferrets) that are used in laboratory classes will be required to provide proof of a current rabies vaccine prior to use in a laboratory setting. Any student who is not fully vaccinated against rabies will not handle an animal until the animal is considered fully vaccinated (see Section III for definitions).
2. Vaccination of humans
    1. Pre-exposure rabies vaccination or evidence of a protective rabies titer within the past twenty-four (24) months is required for all students enrolled in the Program and personnel associated with the Program.
3. Hold/seroconversion period post rabies vaccination
    1. Upon intake into an LMU facility, rabies vaccination is administered to any unvaccinated animal or animal with unknown vaccination status and documented in each animal's medical record. Animals are held for twenty-eight (28) days before the are considered fully vaccinated.
    2. Once at LMU, only fully vaccinated students or students with proof of a protective titer within the past twenty-four (24) months and fully vaccinated Program personnel will care for any animals that are not fully vaccinated against rabies (see Section III for definitions).
4. Hold/observation period for vaccinated animals exposed to rabies

1. Mammals (dogs, cats, horses, and cattle) that are exposed to rabies but current on rabies vaccination shall be given a booster vaccination immediately and are held for forty-five (45) days for observation.
2. Only fully vaccinated employees and students or employees and students with proof of a protective titer within the past twenty-four (24) months will care for any animals not fully vaccinated against rabies on a post-exposure rabies hold (see Section III for definitions).

5. Communication to external parties:
    1. The memorandum of understanding (MOU) signed by Student Practicum Sites states, "All students will be required to obtain Tetanus and Rabies immunizations prior to admission to the clinical educational program and shall otherwise meet those health standards required by UNIVERSITY and SITE, unless student has an Immunization Waiver on file." If any student is not fully vaccinated against rabies, the externship site is required to only allow them to handle animals that are fully vaccinated (see Section III for definitions). LMU will not be liable for any delays this may cause in a student's progression to through the program.
6. Communication to internal parties:
    1. Comprehensive information about rabies is provided to the University President for review. The rabies mitigation policy, including the student vaccination policy, is reviewed and approved by the General Counsel, the Executive Dean of the LMU-CVM, and President of the University.
7. Communication to students:
    1. All students are informed that rabies is a fatal disease and is a serious risk to their health prior to working with any live mammals. Students will also be taught how rabies is transmitted, about the importance of the pre-exposure rabies vaccination, and the steps that should be taken after possible exposure to an animal infected with rabies.
    2. Excerpt from LMU-CVM Student Handbook detailing the rabies vaccine policy: "All students admitted to the Lincoln Memorial University Veterinary Medical Technology Program ***must*** be immunized against Rabies and Tetanus (or be exempted by a physician). This form must be completed by the attending physician as verification of coverage. Students will not be permitted to take any courses that require hands-on training with animals until this form is completed and returned to the Veterinary Medical Technology Program." The handbook also includes a "Rabies Notification" statement which details the risk of rabies as a fatal disease.
    3. During a first semester course (VMT100), students are provided a paper copy of the rabies mitigation policy and the policy is discussed in class. At the end of class, students sign and submit their acknowledgement that they understand that rabies is a fatal disease and is a risk to their health and that they reviewed the rabies mitigation policy.
    4. Students enrolled in a first semester course (VMT120) must pay a $750.00 course fee to cover the purchase and administration of a two-dose rabies vaccine series. The vaccine is administered at a local pharmacy during the initial weeks of their first semester in the Program. Students who have insurance that will cover the rabies vaccination series may opt to be vaccinated before the start of the Program. Students who provide written documentation of rabies vaccination or protective titers within twenty-four (24) months will have the course fee waived and are considered fully vaccinated (see Section III for definitions).
    5. Contact tracing is performed for any students who worked with an unvaccinated animal in the event the animal shows signs of or is diagnosed with rabies. Any student who is not fully vaccinated against rabies will not handle an animal until the animal is considered fully vaccinated (see Section III for definitions).
    6. All client-owned animals must show proof of rabies vaccination and be fully vaccinated. All client-owned animals used for curriculum delivery will be monitored by owners for ten (10) days after student contact. At the end of the ten (10) days, program personnel will call and confirm that the animals used in laboratory are not having any symptoms of rabies. Any animal exhibiting signs of rabies will be examined by a veterinarian and testing of the animal will be required if the veterinarian examining the patient and the public health veterinarian deem it necessary.
8. Comprehensive risk assessment considering local rabies prevalence.
    1. Before each school year begins, an audit of the confirmed rabies cases for the area is completed. This information is available through https://www.cdc.gov/rabies/location/usa/surveillance/index.html. In addition, an audit of confirmed rabies cases is completed for any area where a student completes an externship. This information is provided to the students before they begin live animal laboratories each academic year and before their practicum begins.
    2. Any student exposed to rabies will have immediate wound care if needed and then will be referred to their doctor to begin post-exposure prophylaxis which may include passive antibody administration and/or active immunization.
9. Mitigating human exposure

1. All students and personnel will have appropriate PPE available during live animal and necropsy laboratories. When working with any unvaccinated animal, fully vaccinated students and personnel will be instructed to use gloves, masks, eye protection, long sleeves, pants, and closed-toed shoes. Any student who is not fully vaccinated against rabies will not handle an animal until the animal is considered fully vaccinated (see Section III for definitions).
2. Any student or personnel exposed to a known or suspected case of rabies will have immediate wound care and will be referred to their doctor to begin post-exposure prophylaxis, which may include passive antibody administration and/or active immunization.

X. Contact Information

For more information regarding this policy, please contact Dr. Jay Miles, VMT program director at jay.miles02@lmunet.edu.

XI. Document History

Effective: 2/2022; Revised 7/2023; Revised 7/2024