



Clinical Skills Lab

Zentrum für E-Learning, Didaktik und
Ausbildungsforschung (ZELDA)

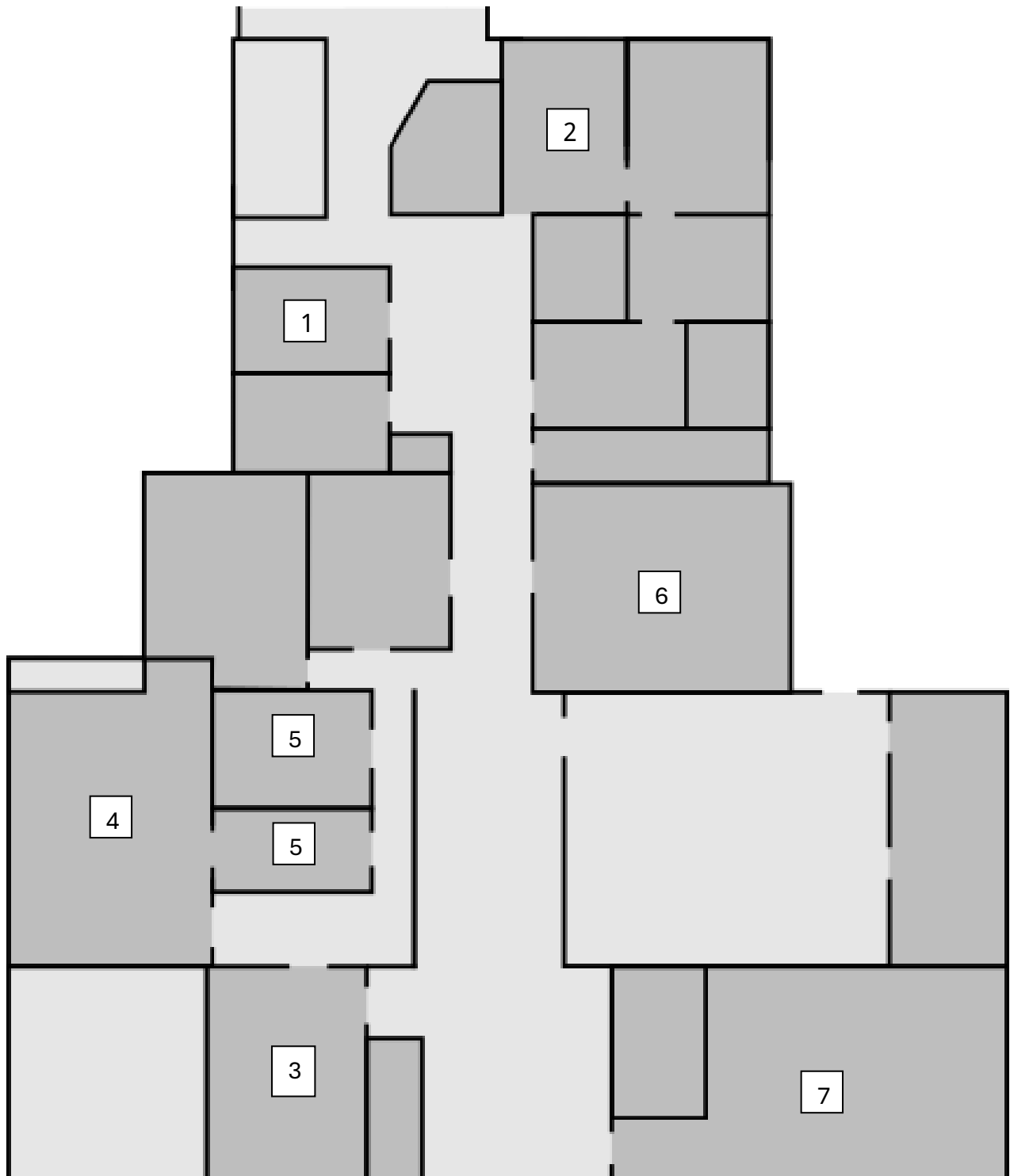
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1 Räume | Rooms

1.1 Übersicht Clinical Skills Lab | Overview Clinical Skills Lab



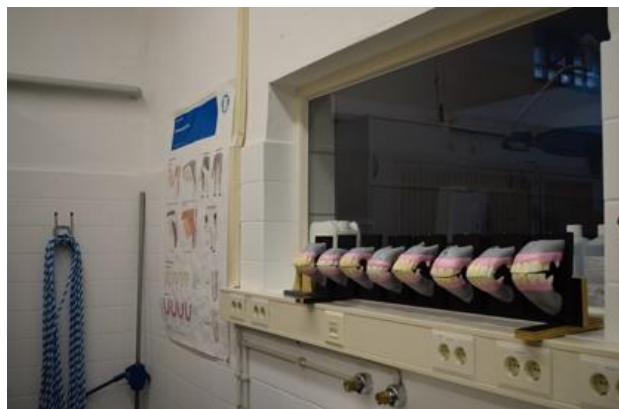
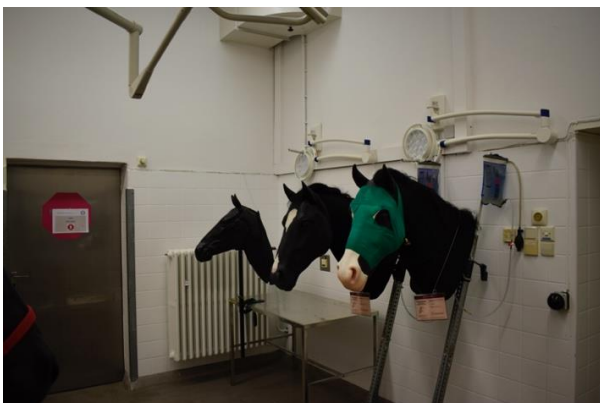
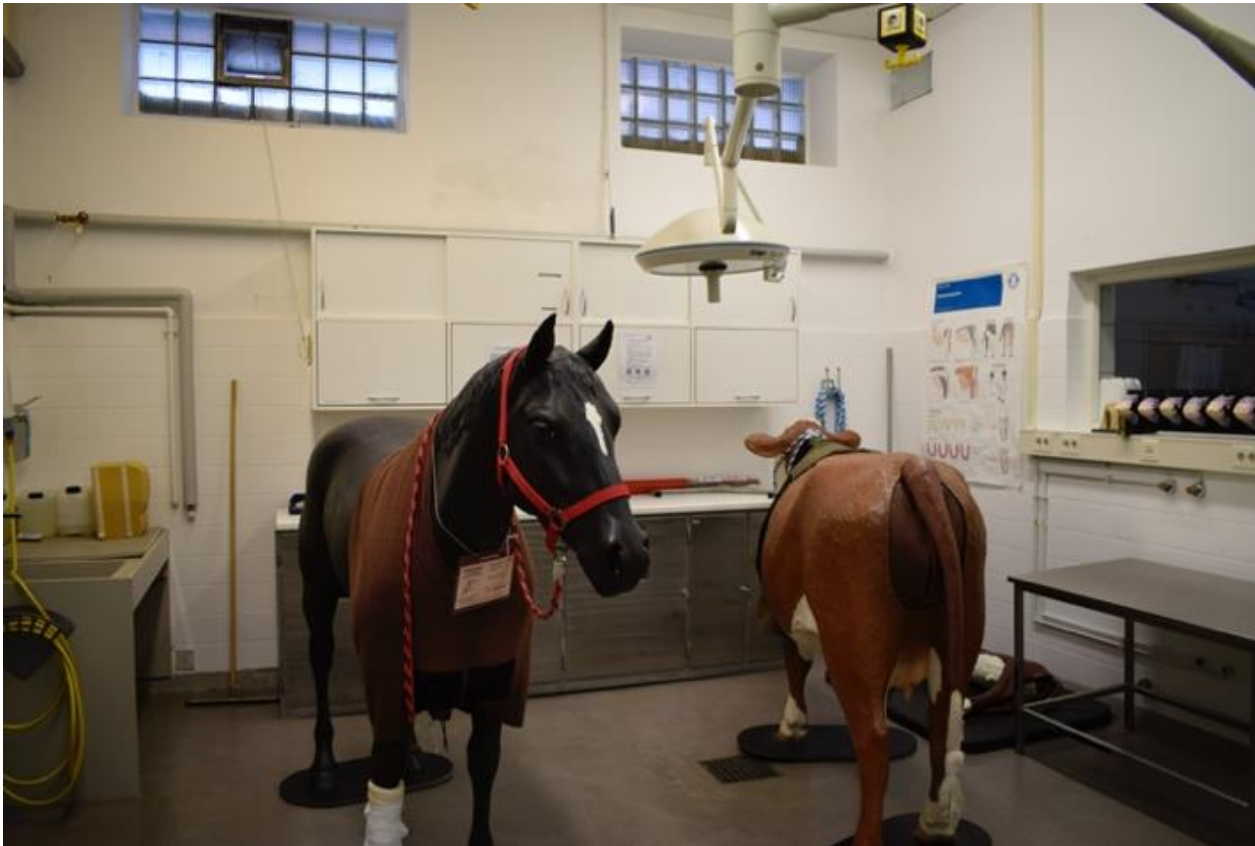
1.2 Labor | Laboratory



1.3 Injektionen und Katheter | Injections and Catheters



1.4 Handling Großtier | Handling Large Animals



1.5 OP, Rektale/ Vaginale Untersuchung Rind/Pferd;
Anästhesie und Notfallmanagement Kleintier |
Surgery, Rectal/ Vaginal Examination Cattle/
Horse; Anaesthesia and Emergency Management
Small Animals



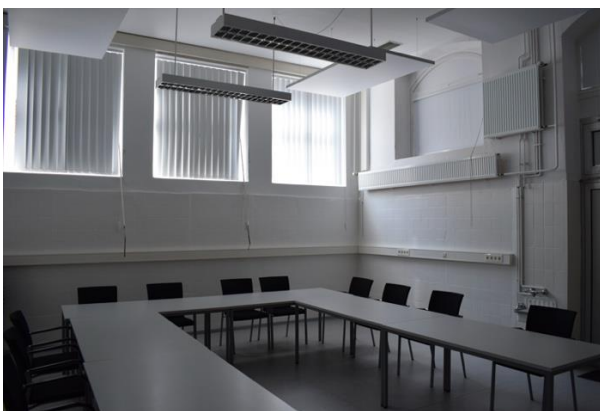
1.6 Händewaschung & Instrumentenkunde | Aspetic surgery preperation (including correct washing of hands, wearing sterile gloves and scrubs)



1.7 Naht- & Knüpftechniken | Stitching & Knotting Techniques



1.8 Seminarräume/ Konferenzraum | Seminar/ Conference Rooms



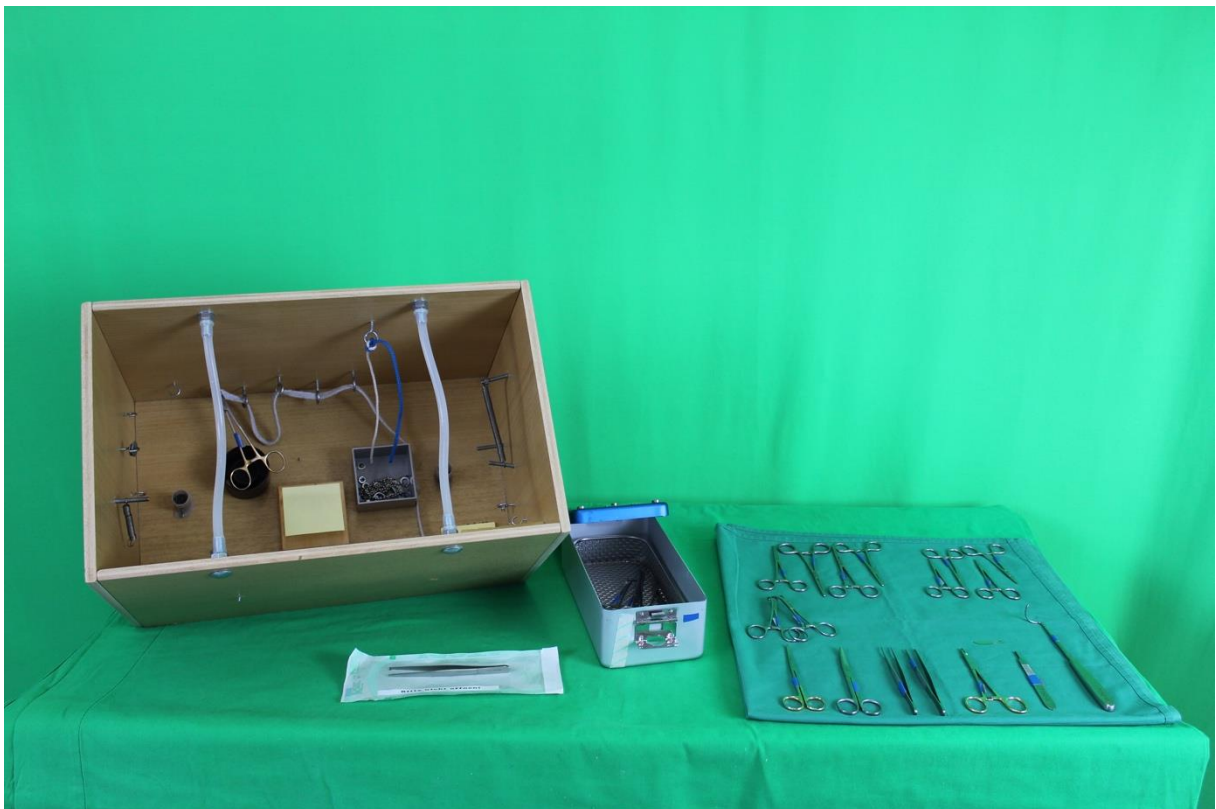
2 Simulatoren/ Modelle | Simulators/ Models

2.1 Chirurgie | Surgery

2.1.1 Allgemeine Instrumentenkunde | General Knowledge of Instruments

Animal Species: non species-related model

Clinical Skill: Presentation of frequently used surgical instruments including their handling alongside with knowledge about the sterilization process.



2.1.2 Knüpftechniken | Knotting Techniques

Animal Species: non species-related model

Clinical Skill: Instrument and hand knotting techniques for the cross knot, slip knot and surgical knot.



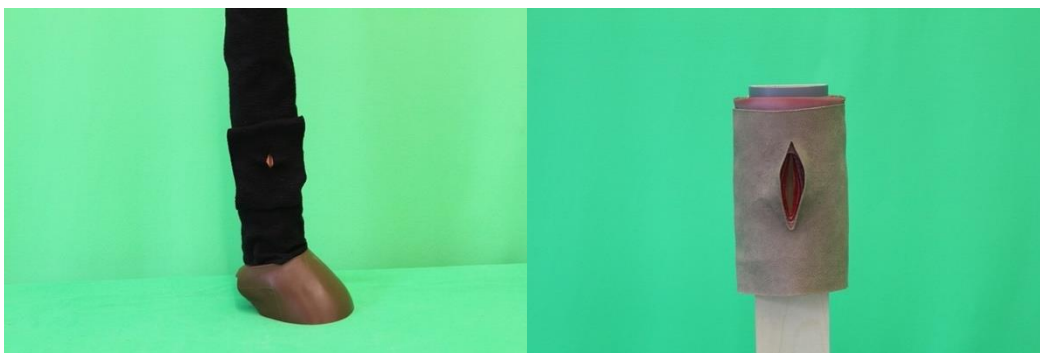
2.1.3 Nahttechniken | Suturing Techniques

Animal Species: non species-related model

Clinical Skill: The closure of wound incisions or vascular openings using various single interrupted and continuous sutures.



2.1.3.1 Nahttrainer Pferdebein | Horse Leg Suture Trainer

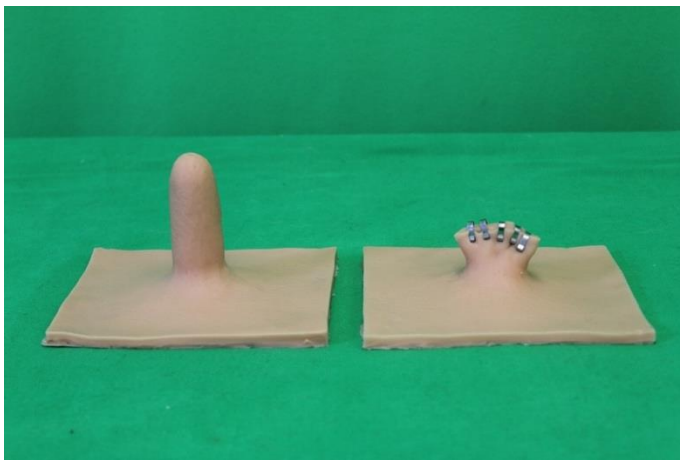


2.1.4 Spezielle OP-Techniken | Special Surgical Techniques

2.1.4.1 Zitzenchirurgie | Teat Surgery

Animal Species: Cattle

Clinical Skill: Performing a Teat Amputation with a 3-layer wound closure (Cistern: continuous and retrograde mattress suture, Vascular/Muscle Layer: purse-string suture, Skin: Michel Staples).



2.1.4.2 Blasenchirurgie | Bladder Surgery

Animal Species: Small Animals

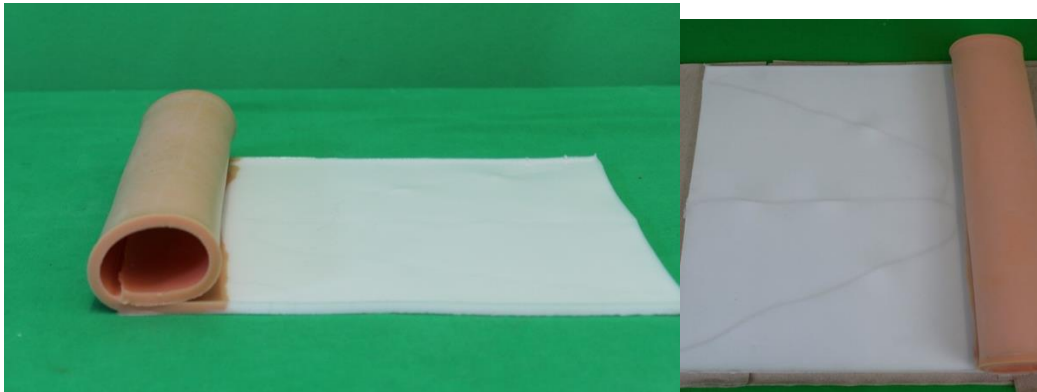
Clinical Skill: Performing single interrupted sutures on a urinary bladder.



2.1.4.3 Darmanastomosen - Simulator „Darmrolle“ | Intestinal Anastomoses - “Intestinal Roll” Simulator

Animal Species: non species-related model

Clinical Skill: Performing an intestinal anastomosis.



2.1.4.4 Simulator für Bühner-Naht | Simulator for Bühner Suture

Animal Species: Small Ruminants

Clinical Skill: Application of a modified Bühner Suture (Bühner Tape).



2.2 Kleintiere | Small Animals

2.2.1 Handling & Fixationsmaßnahmen | Handling & Restraint Measures

Animal Species: Small Animals

Clinical Skill: Handling (including restraint measures) on several simulators.



2.2.2 Injektionen | Injections

Animal Species: Small Animals

Clinical Skill: The preparation and administration of subcutaneous (s.c.) and intramuscular (i.m.) injections and transponder application.



2.2.3 Blutabnahme und Venenkatheter | Blood Sampling and Venous Catheter

Animal Species: Small Animals

Clinical Skill:

- Blood sampling.
- Venipuncture.
- Intravenous (IV) injection.
- Intravenous catheter (IVC) and a central venous catheter (CVC).



2.2.4 Verbände | Bandages

Animal Species: Small Animals

Clinical Skill: The application and removal of a head bandage, thoracic bandage, abdominal bandage, paw bandage and modified Robert-Jones-Bandage.



2.2.5 Harnkatheter | Urinary catheter

Animal Species: Small Animals

Clinical Skill: The basics of inserting and removing a urinary catheter in male dogs and cats and a female dog.



2.2.6 Ernährungssonde, Intubation, Reanimation und Notfallmanagement | Feeding Tube, Intubation, Reanimation and Emergency Management

Animal Species: Small Animals

Clinical Skill: The basics of feeding hospitalised small animals using feeding tubes, the endotracheal intubation and ventilation alongside with the handling of an emergency patient using a simulator of Basic and Advanced Life Support (BLS/ALS).



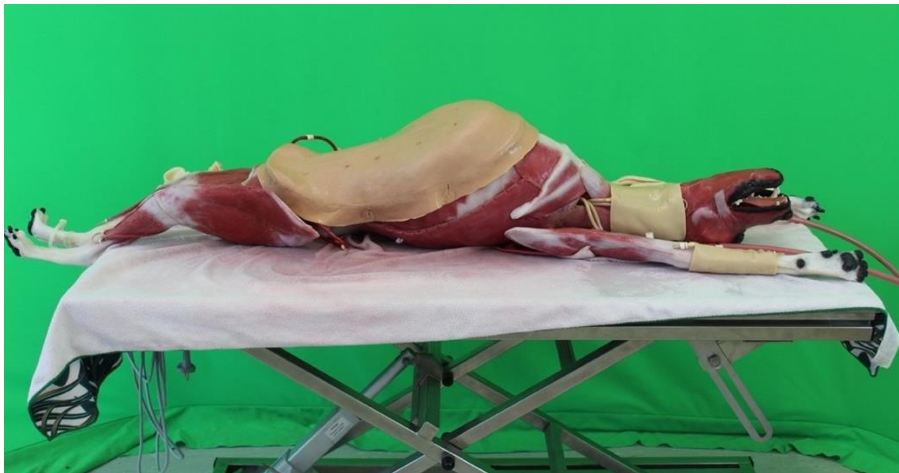
2.2.7 Hybrid Surgical Canine

Animal Species: Small Animals (Dog)

Clinical Skill: The Surgical Canine is a surgical trainer which provides repeatable surgical procedures. It features customizable pathologies integrated with complete vasculature.

Surgical Canine Capabilities:

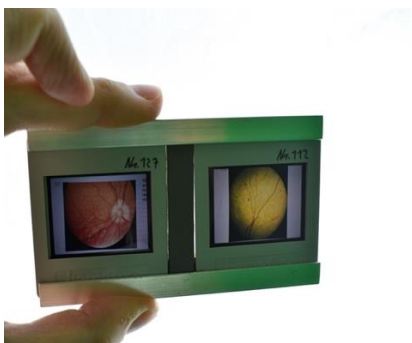
- Standard Abdominal Procedures: Gastrotomy with foreign body removal, Gastropexy, Splenectomy, Liver lobe biopsy, Partial liver lobectomy, Enterotomy with foreign body removal, Intestinal resection with anastomosis, Small intestinal biopsy, Large intestinal biopsy, Ovariohysterectomy, Cystotomy with cystic calculi removal
- Technical Procedures: Cephalic venipuncture, Cephalic vein catheterization, External jugular venipuncture, External jugular catheterization, Orotracheal intubation, Nasoesophageal tube placement, Stomach tube placement, Thoracocentesis, Cystocentesis, Chest tube placement, Urinary catheterization, Upper gastrointestinal endoscopy, Lower gastrointestinal endoscopy, Cystoscopy
- Other Surgical Procedures: Tracheostomy, Cutaneous suturing, Muscular suturing, Surgical hemostasis, Intramuscular injections
- Custom Procedures: Gastric Dilatation Volvulus, Gastropexy, Diaphragmatic hernia repair, Chest tube placement



2.2.8 Allgemeine Augenuntersuchung | General Eye Examination

Animal Species: Small Animals (Dog)

Clinical Skill: The basics of general eye examination in dogs including visualization of the ocular fundus using an ophthalmoscope.



2.2.9 Herzauskultation | Cardiac Auscultation

Animal Species: Small Animals

Clinical Skill: Auscultation with corresponding diagnosis using a dog simulator and recorded examples of heart sounds.



2.2.10 Bildgebende Verfahren | Imaging Procedures

Animal Species: Small Animals

Clinical Skill: General principles of ultrasound examination and positioning techniques for radiographic imaging.



2.2.11 Kastration und Kaiserschnitt | Castration and Caesarean Section

Animal Species: Small Animals

Clinical Skill: Performing a Ovariectomy (OE) and Ovariohysterectomy (OHE) with occlusion of the uterus and linea alba including the rectus sheath.



2.2.12 Liquorpunktion und Epiduralanästhesie | Cerebrospinal Fluid Puncture and Epidural Anaesthesia

Animal Species: Small Animals

Clinical Skill: The suboccipital collection of cerebrospinal fluid and the basics of performing an epidural anesthetic as a way of eliminating pain in the caudal body part.



2.2.13 Thorakozentese | Thoracocentesis

Animal Species: Small Animals

Clinical Skill: The basics and the performance of a thoracocentesis.



2.3 Heimtiere | Small Mammals

2.3.1 Handling | Handling

Animal Species: Small Mammals

Clinical Skill: Several simulators are used to practice handling (including restraint measures) and hand-feeding.



2.3.2 Injektionen | Injections

Animal Species: Small Mammals

Clinical Skill: The preparation and administration of subcutaneous (s.c.), intramuscular (i.m.) and intraperitoneal (i.p.) injections.



2.3.3 Intrakardiale Injektion - Euthanasie Ratte | Intracardiac Injection - Euthanasia Rat

Animal Species: Small Mammals

Clinical Skill: Performing a euthanasia by intracardiac injection in rats or by hyperextension of the neck in mice.



2.3.4 Injektion Intravenös & Venenkatheter | Intravenous Injection & Venous Catheter

Animal Species: Small Mammals

Clinical Skill: Practicing blood sampling and venipuncture alongside with carrying out an intravenous (IV) injection and placing a peripheral intravenous catheter (IVC).



2.3.4.1 Simulator „Kaninchenohr“ | ‘Rabbit Ear’ Simulator



2.3.5 Röntgenlagerung | Positioning for a radiographic examination

Animal Species: Small Mammals

Clinical Skill: The correct positioning for a radiographic examination.



2.4 Vogel

2.4.1 Handling | Handling

Animal Species: Birds

Clinical Skill: Several simulators are used to practice handling techniques.



2.4.2 Verbände | Bandages

Animal Species: Birds (Cockatoo and Macaw)

Clinical Skill: Learning different bandaging techniques (e.g. wing-and-chest-bandage, figure-of-eight bandage).



2.5 Reptilien | Reptiles

2.5.1 Handling | Handling

Animal Species: Reptiles

Clinical Skill: The handling of reptiles can be practiced on several simulators.



2.5.2 Röntgenlagerung | Positioning for a radiographic examination

Animal Species: Reptiles

Clinical Skill: The correct positioning of reptiles such as chelonians, lizards and snakes for radiographic examination.



2.5.3 Injektionen & orale Applikation | Injections & Oral Application

Animal Species: Reptiles

Clinical Skill:

- The preparation and administration of a subcutaneous (s.c.) injection in a snake and an intramuscular (i.m.) injection in a bearded dragon.
- Oral applications in chameleon.



2.5.4 Blutentnahme | Blood Sampling

Animal Species: Reptiles (Chelonians, Snakes and Bearded Dragons)

Clinical Skill: Blood sampling in reptiles including puncture of the dorsal tail vein in chelonians and puncture of the ventral tail vein in snakes and bearded dragons.



2.5.5 Endotracheale Intubation | Endotracheal Intubation

Animal Species: Reptiles (Snakes)

Clinical Skill: Endotracheal intubation using a snake as an example.



2.6 Schweine | Pigs

2.6.1 Handling | Handling

Animal Species: Pigs

Clinical Skill: The handling of pigs and piglets on several simulators.



2.6.2 Injektionen, Blutabnahme und PVK | Injections, Blood Sampling and IVC

Animal Species: Pigs

Clinical Skill:

- The preparation and administration of subcutaneous (s.c.) and intramuscular (i.m.) injections.
- The preparation and performance of blood sampling in piglets and pigs.
- Placing an indwelling venous catheter in the ear vein and fixing it there.



2.7 Schafe | Sheep

2.7.1 Blutentnahme und Injektionen | Blood Sampling and Injections

Animal Species: Sheep

Clinical Skill: The preparation and administration of subcutaneous (s.c.) and intramuscular (i.m.) injections and blood sampling (in the jugular vein and vena cava cranialis).

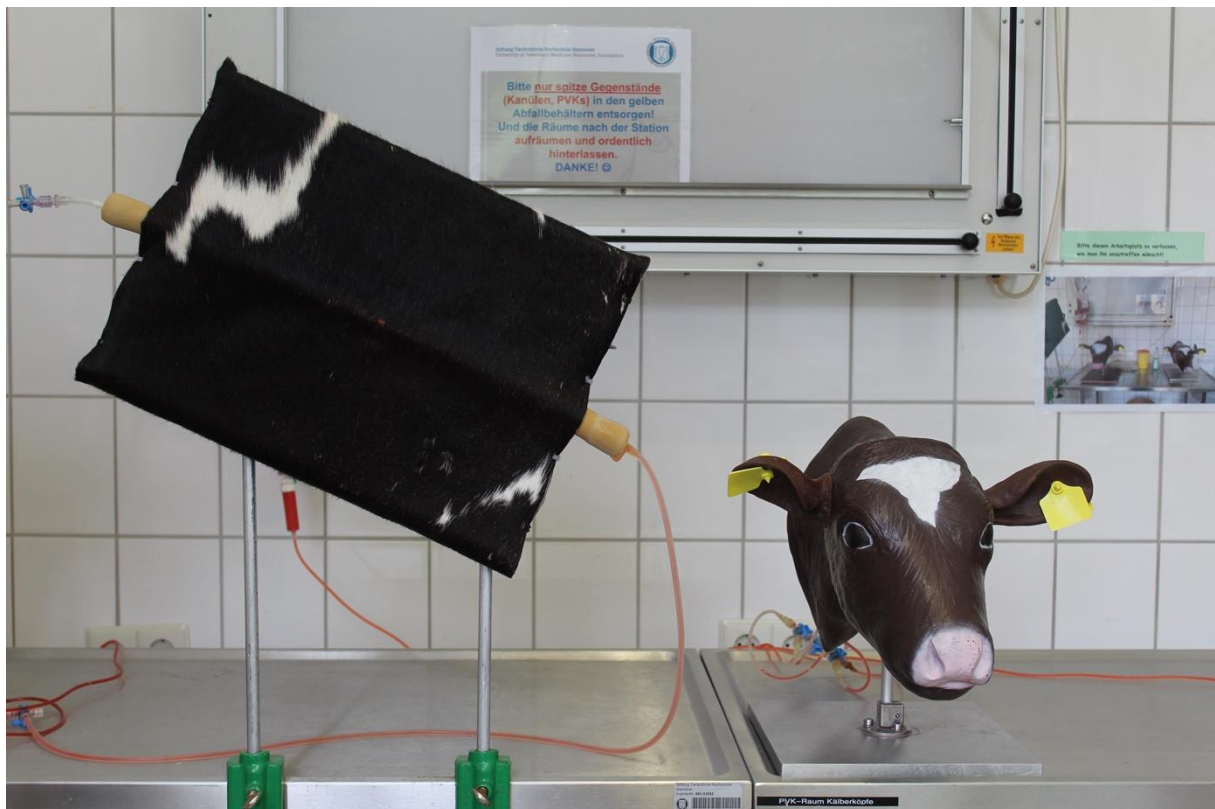


2.8 Rinder | Cattle

2.8.1 Injektion Intravenös, PVK und Blutentnahme | Intravenous Injection, IVC and Blood Sampling

Animal Species: Cattle

Clinical Skill: Practising intravenous injection and blood sampling at the jugular vein. Then placing a peripheral intravenous catheter (IVC) and connecting a continuous infusion.



2.8.2 Klauenverband | Claw Bandage

Animal Species: Cattle

Clinical Skill: The application and removal of a claw bandage on physiological and pathological limb models.



2.8.3 Exploration der Bauchhöhle und Labmagenverlagerung | | Exploration of the Abdominal Cavity and Displacement of the Abomasum

Animal Species: Cattle

Clinical Skill:

- The exploration of the abdominal cavity
- The surgical technique for a left-sided abomasal dislocation according to the Dirksen simulator on a simplified and a complex simulator



2.8.4 Handling, California Mastitis Test, Injektionen und Geburtshilfe | Handling, California Mastitis Test, Injections and Obstetrics

Animal Species: Cattle

Clinical Skill:

- Handling and restraint measures.
- Udder examination.
- Taking a sterile milk sample and performing a milk secretion examination.
- The preparation and administration of subcutaneous (s.c.) and intramuscular (i.m.) injections.

In addition, the physiological process of birth in cattle is repeated. Basic rules for obstetric examination (incl. instruments), diagnosis of anomalies in position and posture and the correction of anomalies in position and posture of the foetus can be practiced. Finally, the labour is induced and expelled.



2.8.5 Transrektale Gynäkologische Untersuchung | Transrectal Gynaecological Examination

Animal Species: Cattle

Clinical Skill:

- Anatomical basics of the female genitalia in cattle.
- The structured performance of the transrectal examination.
- Skills for gynaecological diagnosis of the uterus for pregnancy diagnostics.
- Skills for gynaecological diagnosis of the ovaries for cycle determination.



2.8.6 Kälberenthornung | Calf Dehorning

Animal Species: Cattle (Calves)

Clinical Skill:

- Sedation (intramuscular injection).
- Administration of an analgesic (subcutaneous injection).
- Conduction of anaesthesia.
- Dehorning (removal of the horns) with thermocautery.



2.9 Pferde | Horses

2.9.1 Handling, Injektion intramuskulär und subkutan, Zehen- und Mittelfußpolsterverband, Abdominozentese | Handling, Injection s.c./ i.m., Toe Pad Bandage, Metatarsal Padding Bandage, Abdominocentesis

Animal Species: Horses

Clinical Skill:

- The basics of handling horses using a life-size phantom and the application of a transponder ("chipping").
- The preparation and administration of subcutaneous (s.c.) and intramuscular (i.m.) injections.
- The application and removal of a toe pad bandage.
- The application and removal of a high padded bandage.
- The antiseptic preparation of a puncture site and an abdominal cavity puncture.



2.9.2 Transrektale- und gynäkologische Untersuchung | Transrectal and Gynaecological Examination

Animal Species: Horses

Clinical Skill:

- Transrectal gynecological examination for cycle determination.
- Vaginoscopic examination and swab sampling with the aid of a spreading speculum.
- Breeding hygiene examination.



2.9.3 Hufverband | Hoof Bandage

Animal Species: Horses

Clinical Skill: The application and removal of a hoof bandage using a limb model.



2.9.4 Zahnbehandlung | Dental Treatment

Animal Species: Horses

Clinical Skill: Diagnosis and correction of dental pathologies of the premolars and molars of the horse as part of routine dental treatment.



2.9.5 Nasenschlundsonde | Nasopharyngeal Probe

Animal Species: Horses

Clinical Skill: The placement and removal of a nasogastric tube on the horse simulator.



2.9.6 Peripherer Venenverweilkatheter, Blutentnahme und Kopfverband | Peripheral Intravenous Catheter, Blood Sampling and Head Bandage

Animal Species: Horses

Clinical Skill:

- The application, fixation and removal of a peripheral intravenous catheter (IVC) in the jugular vein.
- Blood sampling from the external jugular vein.
- The application and removal of a head bandage.



2.9.7 Leitungsanästhesien für Augen und Zähne, intravenöse Injektion und Blutentnahme | Conduction Anaesthesia for Eyes and Teeth, Injection IV and Blood Collection

Animal Species: Horses

Clinical Skill:

- Correct localization of puncture sites for selective anesthesia of the eye and for dental treatments on the horse's head.
- Both the intravenous injection of medication and blood sampling from the external jugular vein.



2.9.8 Zahnalterbestimmung | Dental Age Determination

Animal Species: Horses

Clinical Skill: The determination of the age of a horse based on its bit.



2.9.9 Endoskopie | Endoscopy

Animal Species: Horses

Clinical Skill: The basics of using a flexible endoscope.

