
Pilot Project for Class 2010

Name



Student Procedures List
WSU
College of Veterinary Medicine
Class of 2010

<http://courses.vetmed.wsu.edu/ProceduresBooklet/>

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Student Procedures List

WSU, College of Veterinary Medicine

A goal for this year is for students to attempt completion of all procedures in the General Procedures List and the five intra-abdominal or intra-thoracic surgeries on live animals before graduation.

Documented completion of these procedures will assure veterinary employers that you have performed a number of basic techniques which are required for entry level practice. You must have a veterinarian or technician who observes you perform the procedure initial the booklet. You can perform the procedures during required rotations, electives or on preceptorships.

We ask that you include the course number of the rotation on which you performed the procedure when recording completed procedures in the online version of this booklet. A list of rotation course numbers is included in this booklet.

The booklet must be submitted to the Associate Dean for Student and Academic Affairs before May 1, 2010.

Five Recovery Surgeries

Each student is required to perform five (5) intra-abdominal or intra-thoracic recovery surgeries on live animals before receiving the DVM degree. The student must be the primary surgeon on each of these operations. The surgeries must be performed under the supervision of a veterinarian during the 3rd or 4th year of veterinary school. Opportunities to perform these surgeries include: Small Animal or Large Animal Surgery Laboratories, Clinical Small Animal Surgery Services, Agricultural Animal Clinical Services, Equine Surgery, Caine Center Blocks and preceptorships.

To verify the surgeries were performed, the student must list the date, course number, and type of surgery. No signature is needed.

Species Proficiency Procedures

Student Procedures List

WSU, College of Veterinary Medicine

This booklet contains four procedure lists that are color coded. You will note that these include General Procedures, Ruminant Proficiency Procedures, Equine Proficiency Procedures, and Small Animal Proficiency Procedures. The procedures in the specific proficiency areas are not required for graduation, but are to increase your experience and confidence in more defined species. You may attempt to complete as many and varied of these procedures as you desire. Their completion can only enhance your education. You must take the initiative in performing these specialized procedures since there may not be enough cases for all students to perform all the procedures for each species. For the surgical procedures, only the surgeon and assistant can get credit, not the anesthetist who will not have hands-on experience, and should be paying attention to anesthesia.

**Required five intra-abdominal and/or intra-thoracic
recovery surgeries on live animals**

Date	Course Number	Surgical Procedure	No veterinary signature required
1			
2			
3			
4			
5			

WSU Rotation Course Numbers

	Small Animal Community Practice	VM 605, 614
	Small Animal Referral/Internal Medicine	VM 606, 613
	Small Animal Soft Tissue/General Surgery	VM 607, 612
	Small Animal Orthopedic Surgery	VM 608, 611
	Neurology	VM 609
	Small Animal Emergency & ICU	VM 674
	Large Animal ICU	VM 675
	Equine Medicine	VM 629, 636
	Equine Surgery	VM 628, 637, 638

	Anesthesia	VM 650, 615
	Agricultural Animals	VM 630
	Caine Center	VM 633, 635
	Cardiology	VM 621
	Oncology	VM 620
	Clinical Pathology	VM 657
	Diagnostics	VM 656
	Diagnostic Imaging Services	VM 653, 652
	Theriogenology	VM 632
	Exotics	VM 616
	Pharmacy and Therapeutics	VM 651

	Preceptorship	VM 691
	SIPE	VM 690
	Avian Medicine, Puyallup, WA	VM 694
	Epidemiology of Diseases	VM 634
	Herd Problem Investigation	VM 631
	Laboratory Animal Medicine, U of W	VM 693

General Procedures

to be performed by all veterinary students before graduation

B = bovine

C = caprine

E = equine

F = feline

K = canine

L = camelid

O = ovine

P = porcine

ANESTHESIA & PAIN CONTROL

Tranquilization/sedation	O, C, B or L	
Tranquilization/sedation	E	
Tranquilization/sedation	K	
Tranquilization/sedation	F	
General anesthesia (inhalant)	E	

ANESTHESIA & PAIN CONTROL

General anesthesia (inhalant)	K	
General anesthesia (inhalant)	F	
Nerve blocks- lower leg	E	
Endotracheal intubation	LA	
Endotracheal intubation	SA	
Doppler BP	Any	
Oscillometric BP	Any	
Capnography	Any	
Pulse oximetry	Any	
Epidural	K or F	

ANESTHESIA & PAIN CONTROL

Express urinary bladder	K, F	
Epidural	E or B	
Local/line infiltration	Any species	
Manage post-op pain	Any species	

CATHETERS

Place IV catheter	E	
Place IV catheter	K	
Place IV catheter	F	
Place arterial catheter	E	
Place jugular IV catheter	K	

CLINICAL PATHOLOGY

WBC count	
Estimated platelet count	
Packed cell volume (PCV)	
Total solids	
Activated clotting time	
Complete urinalysis	
Wright's/diff-quick stain	
Ear swab cytology	
Fibrinogen by heat precipitation	

DIAGNOSTICS

Skin scrapings	Any species	
Thoracocentesis	Any species	
Abdominocentesis	Any species	
Cystocentesis	K or F	
Needle aspirate SQ mass	Any species	
Wood's light evaluation	Any species	
Acetate (Scotch) tape preparation	K, F or E	
Bacterial culture	Any species	
Fungal culture/DTM	Any species	

DIAGNOSTICS

Pregnancy exam < 90 days	B	
Complete necropsy	E	
Complete necropsy	Ruminant/L	
Complete necropsy	Small animal	
Remove brain	Any species	
Tracheal wash	Any species	
Perform ELISA (test kit)	Any species	

INJECTIONS

IM injection	B	
IM injection	E	
IM injection	F	
IM injection	K	
Subcutaneous injection	B	
Subcutaneous injection	E	
Subcutaneous injection	F	
Intradermal injection	B	
Subcutaneous injection	K	

MEDICATION

Pass capsules with balling gun	B	
Pass capsules with hand	F or K	
Pass stomach tube through mouth with specula	B	
Pass nasogastric tube through nose	E, K	
Calculate fluid RX rate & volume	Any	

MICROBIOLOGY

Fecal flotation	
Gram stain	
Fecal smear	

MISCELLANEOUS

Interstate and export certificate	Any species	
Age animals by teeth & other means	B	
Age animals by teeth & other means	E	
Estimate weights	B, O or C	
Estimate weights	E	
Dental prophylaxis	F or K	
Dental	E	

PHYSICAL EXAMINATION

Physical exam	B	
Physical exam	E	
Physical exam	F	
Physical exam	K	
Physical exam (one of these)	C, O or L	
Oral exam	F	
Oral exam	E	
Oral exam	K	
Examination of eye, gross and ophthalmoscope	Any species	

PHYSICAL EXAMINATION

Use of hoof tester	E	
Blood pressure	Any species	
ECG	Any species	

PROCEDURES

Bandage foot	E	
Bandage foot	K	
Bandage foot	F	
Trim toenails	F or K	
Abdominocentesis	E	
Abdominocentesis	K or F	
Catheterize urethra	Mare	
Catheterize male urethra	F	
Catheterize female urethra	Dog cadaver	
Urine collection	B	

PROCEDURES

Skin punch biopsy	Any species	
Lymph node aspirate or biopsy	Any species	
Ear cleaning	Any species	
Neurologic exam	Any LA	
Neurologic exam	Any SA	
Otoscopic exam	Any species	
Express anal sacs	K	
Bone marrow aspirate	Any species	
Subpalpebral lavage	Any species	

RADIOLOGY & ULTRASOUND

Technique chart for exposures	E	
Technique chart for exposures	K	
Use ultrasound	Any species	
Two views- thorax	K or F	
Two views- abdomen	K or F	

RESTRAINT

Apply twitch to horse upper lip	E	
Apply tail rope, tail tie	E	
Tail restraint	B	
Restrain dog/cat	K, F	
Apply nose lead	B	
Use of stud shank	E	
Apply halter and lead	B	
Apply halter and leading	E	
Halter shank tie	Any species	

RESTRAINT

Restraint of sheep	O	
Method of elevating forelimb	E	
Method of elevating rear limb	E	
Put on muzzle, dog/cat	K, F	

SURGICAL TECHNIQUES

Robert Jones bandage	Any species	
Plaster or fiberglass cast	Any species	
Castration	K	
Castration	F	
Put in wound incision drain	Any species	
Suture skin incision	Any species	
Ovariohysterectomy	K	
Ovariohysterectomy	F	
Skin mass removal	Any species	
Thoracostomy tube	K or F	

SURGICAL TECHNIQUES

Fracture fixation (plastic bones)	K or F	
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THERIOGENOLOGY

Palpate normal uterus and ovaries	B	
Palpate normal uterus and ovaries	E	
Manipulate and correct common dystocias (phantom uterus OK)	Any species	
Place tail wrap on mare	E	

VENIPUNCTURE

Jugular	B	
Jugular	E	
Jugular	K	
Jugular	F	
Cephalic vein	F	
Cephalic vein	K	
Caudal vein (tail vein)	B	

Ruminant Proficiency Procedures

to be performed by students with an added Food Animal Proficiency

B = bovine

C = caprine

L = camelid

O = ovine

DIAGNOSTICS

C.M.T., & strip cup, & udder exam	B	
Manual exam of pharynx/larynx/throat/mouth	B	
Trim hoof	B	
Trim hoof	C or O	
Arthrocentesis (cadaver)	B, C or O	

DIAGNOSTICS

Transtracheal wash	B	
Ruminocentesis	B	
Liver biopsy (therio cow)	B	
Semen collection	B	
Semen exam	B	
Brucellosis (blood test and vaccination)	B	
Pregnancy exam: cow, 40 days & 120 days	B	
Oral exam	B	
Percuss sinuses	B	

DIAGNOSTICS

Physical exam for lameness	B	
Intradermal TB testing	B	

MEDICATION

Sheep, oral medication	O	
Subconjunctival injection	B	
Rumen transfaunation	Any ruminant	
Gastric tube	C, O or Calf	
IV abdominal (milk vein)	B	
Subcutaneous injection	C, O or L	
Place IV catheter (any one)	C, L or B	

MISCELLANEOUS

Milk cow by hand and by machine	B	
Market grades and price/pound	B	
Market grades and price/pound	O	
Place ear tags and ear tattoo	B	
Body condition score	B	

RADIOLOGY & OTHER TWO-DIMENSION IMAGING

Ultrasound for pregnancy	C or O	
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RESTRAINT

Techniques to prevent kicking	B	
Antikicker (devices)	B	
Squeeze chute operation	B	
Flank calf	B	
Method of elevating forelimb	B	
Method of elevating rear limb: cow; (2 methods)	B	
Mouth specula and gags	B	
Cast cow (2 methods)	B	

SEDATION, ANESTHESIA & PAIN CONTROL

IV Xylazine	B	
IV Xylazine	C	
Cornual nerve block	B	
Cornual nerve block	C	
Palpebral nerve block	B	
Paralumbar block	B	
IV block of leg	O or B	
Manage post operative pain	Any ruminant	
Intubation	B, C or O	

SURGICAL TECHNIQUES

Insert nose ring (cadaver)	B	
Dehorn adult (> 4 mos.)	C	
Dehorn adult (> 6 mos.)	B	
Opening hard milking teat (on removed udder)	B	
Suture cut teat (on removed udder)	B	
Dehorn calf (hot iron or Roberts or Barns)	B	
Amputate claw (cadaver) or sheep	O or B	
Castrate	Lamb or calf	
Bandage foot	B	

SURGICAL TECHNIQUES

Block on cow's foot (cadaver)	B	
Enucleate eye	B or O	
Abomasopexy or omentopexy	B	
Rumenotomy	O or B	
Cast metacarpus/metatarsus	B	
Purse string prolapsed rectum (cadaver)	B, O or P	
Prolapsed vagina (1 method)	B or O	
Caesarian section	B or O	
Urethrostomy	Any	
Tracheotomy	B, O or C	

THERIOGENOLOGY

Pass insemination pipette	B	
Reproductive exam	O or B	
Prolapsed uterus	Any	
Estimate stage of gestation	B	

Equine Proficiency Procedures

to be performed by students with an added Equine Proficiency

ANESTHESIA, PAIN CONTROL, SEDATION

Carpal joint block	
Stifle joint block	
Shoulder joint block	
Post-op pain management	
Tranquilization, sedation-IV ketamine & xylazine	
Low palmar nerve block	

ANESTHESIA, PAIN CONTROL, SEDATION

Four point nerve block	
Coffin joint block	
Fetlock joint block	
Palpebral nerve block	
Palmar/plantar digital nerve block	
Abaxial sesamoid nerve block	

DIAGNOSTICS

Lameness evaluation	
Flush nasolacrimal duct	
Pull shoe/trim hoof	
Endoscopy pharynx/larynx	
Cisternal tap or lumbosacral tap (cadaver)	
Catheterize guttural pouch	
Arthrocentesis	
Thoracocentesis	
Liver biopsy	
Bone marrow biopsy (cadaver)	

DIAGNOSTICS

Semen collection	
Semen exam	
Stage of estrus by rectal palpation	
Pregnancy exam: mare, 45 days	
Catheterize urethra: gelding	
Central venous pressure	

MEDICATION

Oral medication	
Subconjunctival injection	
Intra-articular injection	

MISCELLANEOUS

Fill out EIA test form	
Clean prepuce	

POSITION HORSE FOR RADIOGRAPHIC VIEWS OF:

P3s for rotation	
Foot for navicular	
Carpus	
Metacarpus or metatarsus	
Tarsus	

RADIOLOGY & OTHER TWO-DIMENSIONAL IMAGING

Ultrasound, other than reproductive	
Pregnancy ultrasound	

RESTRAINT

Cast foal	
Lead foal (rump rope)	
Apply blindfold	
Apply breeding hobbles (mare)	
Use of bib, cradle, muzzle	

SURGICAL TECHNIQUES

Castration	
Caslicks	
Suture laceration	
Apply limb cast	
Remove wolf teeth	
Stabilize limb for transport	
Tracheotomy	

THERIOGENOLOGY

Reproductive exam, mare	
Artificial insemination	

VENIPUNCTURE

Blood draw other than jugular	
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Small Animal Proficiency Procedures

to be performed by students with an added Small Animal Proficiency

F = feline

K = canine

BLEEDING & INJECTING

Take blood from saphenous vein	K	
Jugular vein catheter	K or F	

DIAGNOSTICS

Prostatic wash	K	
Atlanto-occipital CSF collection	K	
Arthrocentesis (stifle, carpus, shoulder)	K or F	
Measure central venous pressure	K or F	
Biopsy	K or F	
Fine needle aspirate SQ mass	K or F	
Arterial blood gas	K or F	
Video otoscope exam	K	
Pericardiocentesis	K	
Two dimensional echocardiogram	Any	

DIAGNOSTIC IMAGING

Position small animal for radiographs Hips Stifle Shoulder Carpus Hock Elbow Vertebral spine	K or F	
Ultrasound abdomen	K or F	
Two dimensional echocardiography	K or F	
Contrast study	K or F	

MEDICATION

Oral medication	F	
Subconjunctival injection	K	
Enema	Any	

MISCELLANEOUS

CPR	K or F	
Nasal O ₂ administration	K	

OPHTHALMOLOGY

Excision of eyelid mass	K or F	
Enucleation	K or F	
Third eyelid flap	K or F	

SURGICAL, DENTAL, BANDAGING

Splint fracture	K or F	
Dental extraction	K	
Mass removal	K or F	

THERIOGENOLOGY

Infertility exam	K	
Artificial insemination	K	
Semen examination	K	
Vaginal cytology	K	
Pregnancy by ultrasound	K or F	

Abaxial sesamoid nerve block	42	Arthrocentesis	31, 43, 51
Abdominocentesis	15, 23	Artificial insemination.....	49, 55
Abomasopexy or omentopexy	39	Atlanto-occipital CSF collection	51
Acetate (Scotch) tape preparation.....	15	Bacterial culture	15
Activated clotting time	14	Bandage foot	23, 38
Age animals by teeth	20	Biopsy	51
Amputate claw.....	38	Block on cow's foot (cadaver)	39
Antikicker (devices)	36	Blood draw other than jugular.....	49
Apply blindfold	47	Blood pressure.....	22
Apply breeding hobbles.....	47	Body condition score.....	35
Apply halter and lead.....	26	Bone marrow aspirate.....	24
Apply halter and leading.....	26	Bone marrow biopsy	43
Apply limb cast.....	48	Brucellosis.....	32
Apply nose lead	26	C.M.T., strip cup, udder exam.....	31
Apply tail rope, tail tie	26	Caesarian section.....	39
Apply twitch to horse upper lip	26	Calculate fluid therapy rate/volume ..	18
Arterial blood gas	51	Capnography	11

Carpal joint block	41	Coffin joint block	42
Carpus.....	46, 52	Complete necropsy	16
Caslicks	48	Complete urinalysis.....	14
Cast cow (2 methods)	36	Contrast study.....	52
Cast foal.....	47	Cornual nerve block.....	37
Cast metacarpus/metatarsus.....	39	CPR	53
Castrate	38	Cystocentesis.....	15
Castration	28, 48	Dehorn adult (> 4 mos.)	38
Catheterize female urethra	23	Dehorn adult (> 6 mos.)	38
Catheterize guttural pouch.....	43	Dehorn calf.....	38
Catheterize male urethra	23	Dental.....	20, 54
Catheterize urethra	23, 44	Dental prophylaxis	20
Caudal vein (tail vein)	30	Doppler BP.....	11
Central venous pressure.....	44	Ear cleaning	24
Cephalic vein.....	30	Ear swab cytology	14
Cisternal tap or lumbosacral tap	43	ECG.....	22
Clean prepuce	45	Endoscopy pharynx/larynx.....	43

Endotracheal intubation.....	11	Fine needle aspirate SQ mass.....	51
Enema.....	53	Flank calf.....	36
Enucleate eye.....	39	Flush nasolacrimal duct.....	43
Enucleation.....	54	Foot for navicular.....	46
Epidural.....	11, 12	Four point nerve block.....	42
Estimate stage of gestation.....	40	Fracture fixation (plastic bones).....	29
Estimate weights.....	20	Fungal culture/DTM.....	15
Estimated platelet count.....	14	Gastric tube.....	34
Examination of eye.....	21	General anesthesia.....	10, 11
Excision of eyelid mass.....	54	Gram stain.....	19
Express anal sacs.....	24	Halter shank tie.....	26
Express urinary bladder.....	12	IM injection.....	17
Fecal flotation.....	19	Infertility exam.....	55
Fecal smear.....	19	Insert nose ring.....	38
Fetlock joint block.....	42	Interstate and export certificate.....	20
Fibrinogen by heat precipitation.....	14	Intra-articular injection.....	45
Fill out EIA test form.....	45	Intradermal.....	17, 33

Intubation	37	Mass removal	54
IV abdominal (milk vein)	34	Measure central venous pressure	51
IV block of leg.....	37	Metacarpus or metatarsus.....	46
IV Xylazine	37	Method of elevating forelimb.....	27, 36
Jugular	30, 50	Method of elevating rear limb	27, 36
Lameness evaluation.....	43	Milk cow by hand and machine.....	35
Lead foal.....	47	Mouth specula and gags	36
Liver biopsy	32, 43	Nasal O ₂ administration.....	53
Local/line infiltration.....	12	Needle aspirate SQ mass	15
Low palmar nerve block.....	41	Nerve blocks.....	11
Lymph node aspirate or biopsy	24	Nerve blocks- lower leg	11
Manage post operative pain	37	Neurologic exam	24
Manage post-op pain	12	Opening hard milking teat.....	38
Manipulate and correct dystocias	29	Oral exam.....	21, 32
Manual exam of		Oral medication.....	45, 53
pharynx/larynx/throat/mouth	31	Oscillometric BP	11
Market grades and price/pound.....	35		

Otoscopic exam	24	Physical exam for lameness.....	33
Ovariohysterectomy	28	Place arterial catheter	13
P3s for rotation	46	Place ear tags and ear tattoo	35
Packed cell volume (PCV).....	14	Place IV catheter	13, 34
Palmar/plantar digital nerve block.....	42	Place jugular IV catheter	13
Palpate normal uterus and ovaries	29	Place tail wrap on mare	29
Palpebral nerve	37, 42	Plaster or fiberglass cast.....	28
Paralumbar block.....	37	Position small animal for rads	52
Pass capsules with balling gun	18	Post-op pain management	41
Pass capsules with hand.....	18	Pregnancy by ultrasound	55
Pass insemination pipette.....	40	Pregnancy exam < 90 days.....	16
Pass nasogastric tube through nose....	18	Pregnancy exam: cow.....	32
Pass stomach tube through mouth	18	Pregnancy exam: mare, 45 days	44
Percuss sinuses	32	Pregnancy ultrasound	46
Perform ELISA (test kit)	16	Prolapsed uterus	40
Pericardiocentesis	51	Prolapsed vagina (1 method).....	39
Physical exam.....	21	Prostatic wash.....	51

Pull shoe/trim hoof	43	Sheep, oral medication	34
Pulse oximetry	11	Shoulder joint block	41
Purse string prolapsed rectum.....	39	Skin mass removal	28
Put in wound incision drain	28	Skin punch biopsy	24
Put on muzzle, dog/cat.....	27	Skin scrapings	15
Remove brain	16	Splint fracture.....	54
Remove wolf teeth.....	48	Squeeze chute operation.....	36
Reproductive exam	40, 49	Stabilize limb for transport.....	48
Restrain dog/cat	26	Stage of estrus by rectal palpation....	44
Restraint of sheep	27	Stifle joint block.....	41
Robert Jones bandage	28	Subconjunctival injection.....	34, 45, 53
Rumen transfaunation.....	34	Subcutaneous injection.....	17, 34
Rumenotomy	39	Subpalpebral lavage	24
Ruminocentesis.....	32	Suture cut teat.....	38
Semen collection	32, 44	Suture laceration.....	48
Semen exam	32, 44	Suture skin incision	28
Semen examination	55	Tail restraint	26

Take blood from saphenous vein.....	50	Two dimensional echocardiography..	52
Tarsus	46	Two views- abdomen	25
Technique chart for exposures.....	25	Two views- thorax.....	25
Techniques to prevent kicking.....	36	Ultrasound abdomen	52
Third eyelid flap	54	Ultrasound for pregnancy	35
Thoracocentesis	15, 43	Ultrasound, other than reproductive ..	46
Thoracostomy tube	28	Urethrostomy.....	39
Total solids	14	Urine collection	23
Tracheal wash.....	16	Use of bib, cradle, muzzle	47
Tracheotomy	39, 48	Use of hoof tester	22
Tranquilization, sedation-IV ketamine & xylazine	41	Use of stud shank	26
Tranquilization/sedation	10	Use ultrasound.....	25
Transtracheal wash	32	Vaginal cytology	55
Trim hoof.....	31	Video otoscope exam	51
Trim toenails.....	23	WBC count.....	14
Two dimensional echocardiogram.....	51	Wood's light evaluation	15
		Wright's/diff-quick stain	14