

The Academy of Veterinary Technicians in Clinical Practice



**General Application Packet
2023-2024 Case Year**

SUBMISSION GUIDELINES

The application year begins July 1, 2023 and ends at 11:59pm June 30, 2024. All skills, logs, reports, reference, and signatures must be obtained during the application year.

The Pre-Application must be submitted no later than 11:59pm PST, September 30, 2023. All of the Pre-Application is to be completed by filling out online forms available by the provided links on the “Application Information” page of our website.

Once the Pre-Application has been accepted, applicants will receive an invitation to place their Final Application documents in the secure AVTCP DropBox. Case logs must be submitted sequentially in 1 MS Word document. Reports must be submitted sequentially as 1 MS Word document. PDF scans of logs and reports will not be accepted. Other documents may be submitted as PDFs or MS Word documents.

Final Application submissions, including all applicable documents, attachments, and letters of recommendation, will be accepted up to 11:59pm PST, June 30, 2024. No Final Applications will be accepted beyond the due date and time.

The total fee for applying is \$100. The Pre-Application fee of \$50 is required upon submission of the Pre-Application and the Final Application fee of \$50 is required upon submission of the Final Application using the Paypal link provided on the website.

Please be sure the name on your PayPal payment is the same name as on your application and allow enough time to set up your Paypal account in order for AVTCP to receive payment by the due dates and times.

If you have ever had a different name, nickname, or alias that may show up on documents or letters of recommendation, you must alert us of these names by emailing avtcpinformation@gmail.com. If we receive documentation with different names and cannot easily match them to you, they may be discarded and could trigger a failed application.

International applicants must ensure their fee is paid in US dollars.

Pre-Application

Due: September 30, 2023

Please go to the AVTCP website's "Application Information" page to access all of the elements required for the Pre-Application. The elements include:

- Waiver, Release, and Indemnity Agreement
- Professional History and attached proof of credentials
- Veterinary Technician Employment History
- Continuing Education Log and attached proof of attendance
- Knowledge List
- Proposed Recommendation Letter Writers
- Payment of \$50

FINAL APPLICATION

Due: June 30, 2023

Final Application elements include:

- Exam Questions
- Case Logs
- Case Reports
- Letters of Recommendations
- Payment of \$50

The following documents are general components of the Final Application for potential applicants to refer to. Please see the application on the page of your chosen specialty for the most accurate Final Application as each specialty has their own specific differences and instructions.

Instructions for writing exam questions

Stem - introductory statement (information required) and the question itself that elicits the correct answer.

DO THIS

- 1) Develop patient based questions but don't present a real case. Present a scenario.
- 2) Stems should be complete and as succinct as possible. Avoid adding unnecessary or misleading information.
- 3) The stem should be clear enough to provide the examinee with sufficient information to anticipate the type of answer before looking at the responses.
- 4) Items should be written to assess knowledge of meaningful facts and concepts, not trivial information. Avoid tricks.
- 5) Include in the stem all words that would otherwise have to be repeated in each of the responses.

DON'T DO THIS

- 6) Don't test more than one point
- 7) Avoid using "What would you do?" or "What do you believe?" as these statements cannot be tested
- 8) Avoid the use of gender pronouns
- 9) Avoid ambiguous terms such as rarely, commonly, frequently, generally, sometimes and usually. Avoid jargon
- 10) Never use flawed question formats – negative question, true/false, least likely, none of the above, all of the above

Responses or Options – 1 correct “answer” plus 3 incorrect “distractors”.

- a) Always list the correct answer first.
- b) Always start with a capital letter unless part of a sentence.
- c) The correct answer must be absolutely correct. Pitfall: Lack of one clearly best answer
- d) Incorrect answers should be realistic and plausible. No nonsense distractors
- e) Make sure you aren't including unintentional clues to the correct answer
- f) Distractors should represent unsafe practices or commonly held misconceptions and should be plausible.
- g) All responses should be grammatically consistent with the item stem, and all responses should be parallel.
- h) Do not make the correct answer substantially longer or more detailed than the distractors
- i) Do not use non-homogenous options, don't make the candidate choose between apples and oranges

Rationale – Brief statement explaining the testing point, be sure to describe

- (1) the testing point
- (2) why you picked the different options
- (3) why the indicated answer is best.

References – Author, Title, Publisher, year, page

References should be current, ideally less than 10 years and on the reading list of the specialty.

Avoid proceedings or journal articles as not every candidate will have access to these documents.

References must agree. For example, normal heart rate of a dog differs slightly depending on the text. There is no one answer.

AVTCP EXAM QUESTION FORM

- Please submit 5 exam questions specific to your practice category for committee review for possible use on future AVTCP examinations.
- These questions must be advanced in nature and follow the AVTCP format using the instruction provided.
- Each question must come from a different domain and species (where multiple species applies).
- Questions must be submitted in a WORD document only.

Question # _____

Question: (Stem)

Responses: (Please list the correct response **first**, capitalize first letter of each response)

- A.
- B.
- C.
- D.

Reference: (Source you would quote to prove the correct answer is in fact correct)

Author:

Title:

Publisher:

Year:

Page(s):

Rationale: (A short statement explaining the testing point)

Name:

Contact information:

E-mail address:

Practice Category

- Canine/Feline Feline Exotic Companion Animal Production Medicine

Domain

- | | |
|---|---|
| <input type="checkbox"/> Anesthesia and Analgesia | <input type="checkbox"/> Body Mechanics & Systems |
| <input type="checkbox"/> Diagnostic & Laboratory | <input type="checkbox"/> Diseases |
| <input type="checkbox"/> Pharmacology | <input type="checkbox"/> Animal Care & Treatment |
| <input type="checkbox"/> Surgical Nursing | <input type="checkbox"/> Dentistry |
| <input type="checkbox"/> Behavior | <input type="checkbox"/> Practice Management |

AVTCP CASE LOGS – Instructions

Case logs are scored on a points system. Failure to follow the instructions below will result in loss of points which, if exceed the acceptable amount, will result in failure of the log.

- A *minimum* of 50 cases reflecting the mastery of advanced clinical practice knowledge and skills are required. Applicants are encouraged to submit > 50 cases (maximum of 75) as individual cases may be rejected.
- Logs must be submitted in one complete WORD document, not multiple documents or as PDFs.
- Acceptable case logs must be taken from experience obtained while practicing with companion animals or production animals relevant to your specialty category. Case logs taken from zoo medicine, laboratory medicine, shelter medicine, or wildlife medicine will not be accepted. All animals must be “owned” by a client and not belonging to the applicant.
- Cases submitted must take place between July 1 and June 30 of the application year and should be listed in chronological order from oldest to newest.
- A *minimum* of 80% of the skills list must be mastered and cross-referenced in the case logs. Mastery is defined as being able to perform the task safely, with a high degree of success, and without being coached or prompted.
 - Once a skill is performed and mastered, it should be noted on the skills list and witnessed as instructed.
 - The corresponding number of the skill should be indicated in parentheses after describing the skill within the log. While you only need to cite each skill once on the skill sheet, please indicate the skill number in every log after each time you perform it.
 - Select cases that demonstrate more than one advanced skill and include a variety of differing cases and procedures.
- Please be sure to specify details, such as sites/locations for skills list items such as IV catheter placement and size, venipuncture site, drug administration route, etc.
- The AVTCP case log outline should be utilized. Each case log should be numbered individually and no case log should be longer than one page in length.
- Each case log should only include details for a single patient visit. Multiple visits by the same patient count as only one case unless presented for an entirely new problem.
- Abbreviations should be expanded on first mention if not on AVTCP’s acceptable abbreviation list in each individual case log. If expanded and abbreviated on case log #1, it must ALSO be expanded on first mention for any case log where that same abbreviation is used again.
- Logs should be written in 3rd person with perfect spelling and grammar.
- Logs should be written in Times New Roman 10pt with 1” margins, single-spaced.
- Medications should be referred to by generic drug name, not brand or trade name. If a medication has no generic name, it must be noted with proper marks, E.G. Nocita® or Proviale™.
- Drug dosages must be expressed in metric units with specific dosage, time intervals, and route of administration.
 - *Correct – enrofloxacin (10mg/kg) 200 mg IV q12h ; Incorrect – Baytril® 8.8 mL bid.*
 - *Rounding of doses is only acceptable for medications given per os.*
 - *Medications being dispensed for home use must include duration of use.*
 - *Dosing information only has to be mentioned once per log unless doses changes.*
- ***Please see any additional case log requirements in your specific practice category application.***

AVTCP CASE LOG - Format

Applicant's name: _____
Case log # _____ *Date* _____ *Patient ID* _____
Species/Breed _____ *Age* _____ *Sex* _____ *Wt* _____ (kg) *BCS* _____ *Pain Score* _____
Diagnosis _____

Treatment Plan _____

Advanced skills & procedures performed _____

Outcome _____

AVTCP CASE REPORTS – Instructions/Guidelines

- Four (4) complete case reports are required.
- Cases submitted must take place between July 1 and June 30 of the application year.
- Acceptable case reports in clinical practice must be taken from experience obtained while practicing with companion animals or production animals relevant to your specialty category. Case reports taken from zoo medicine, laboratory medicine, shelter medicine, or wildlife medicine will not be accepted. All animals must be “owned” by a client.
- Case reports will not be accepted from patients belonging to the applicant.
- Reports must be no more than five (5) pages each, 1” margins, Times New Roman 10pt., and double-spaced. References and any appendices (E.G. laboratory and/or diagnostic imaging reports, etc.) are not included as part of the five-page maximum and may be submitted separately.
- The case report must be taken from a case logs. The case log# must be included in the case report.
- Abbreviations should be expanded on first mention if not on AVTCP’s acceptable abbreviation list in each case report.
- Please be sure to specify details, such as sites/locations, IV catheter placement and size, venipuncture site, drug administration route, etc.
- Reports must demonstrate expertise in the management and treatment of clinical cases and will be reviewed for overall quality of nursing care, therapy instituted by the technician, goals of care and therapy, and the technician’s role in the management as it relates to the case.
- All case reports involving procedures with animals that are heavily sedated or anesthetized must include an anesthetic monitoring log. This report is not included as part of the 5-page maximum.
- Case reports will also be scored on:
 - **Writing** (use of scientific language, style, grammar, syntax, ability to communicate clearly, concisely yet thoroughly).
 - **Disease/condition** (demonstrating a clear understanding of the disease/condition and explaining the relevant anatomy, pathology and pathophysiology).
 - **Diagnostics** (explanation of diagnostics including reason for test, role in performing test, both normal & abnormal results and nursing response to test).
 - **Nursing care and therapy** (explanation of goals of nursing care and therapy and role in care).
 - **Pharmacology** (demonstrating a strong grasp of pharmaceuticals used including all areas of treatment, including anesthesia/analgesia, plus mastering their role of calculating, administering, and explaining the use of the medications).

- Appendices may be included if necessary/desired (ECG tracings, chemotherapy protocols, radiology reports, etc.).
- Reports should be written in 3rd person with perfect spelling and grammar.
- The use of references is encouraged. Plagiarism will result in immediate rejection.
- Medications should be referred to by drug name, not brand or trade name. If a medication has no generic name, it must be noted with proper marks. E.G. Nocita® or Proviabie™.
- Drug dosages must be expressed in metric units with specific dosage, time intervals, and route of administration.
 - *Correct – enrofloxacin (10mg/kg) 200 mg IV q12h ; Incorrect – Baytril® 8.8 mL bid.*
 - *Rounding of doses is only acceptable for medications given per os.*
 - *Medications being dispensed for home use must include duration of use.*
 - *Dosing information only has to be mentioned once per report unless doses changes.*
- Any attached laboratory reports should be reported in Conventional Units. The following internet conversion page is acceptable to use: [AMA Manual of Style Conversion Calculator](#)

Please see any additional case report requirements in your specific practice category application.

AVTCP CASE REPORTS - Format

AVTCP Case Report #

Case Log#

Title

Author

Signalment

Age, weight, species, breed, gender, BCS, pain score

Presenting Complaint

History

Physical Exam Findings/Observations (admit/first contact)

Problem List/Differential Diagnosis

Diagnostic Approach

Include whether lab work was performed in-house or at an outside laboratory.

Treatment Plan

Final Diagnosis

Outcome

Necropsy and postmortem testing should be included here if appropriate.

Conclusion/Case Summary

Include information on the disease/condition, the typical history and presentation, the diagnostic approach, treatment and management options, expected outcome and prognosis, and any other pertinent information. Information should be current and high quality; standard textbooks and peer-reviewed journal articles are preferred. All researched information is to be cited.

Discussion

The Discussion section is used to evaluate and critique the case. Unlike the actual Case Report, which is an objective recording of the facts of the case, the Discussion is a subjective analysis of the case management. Explain any deficiencies or potential errors in the case, and justify any steps taken or choices made that differ from case management.

AVTCP ACCEPTABLE ABBREVIATIONS

These abbreviations may be used without expansion in AVTCP applications:

Ab	antibody	FIP	feline infectious peritonitis
ACT	activated clotting time	FIV	feline immunodeficiency
aPTT	activated partial	virus	
thromboplastin time		g	gram(s)
ASA	American Society of	g	gauge
Anesthesiologists		gr	grain(s)
AS	left ear	h/hr	hour(s)
AD	right ear	Hct	hematocrit
AU	both ears	Hgb	hemoglobin
BAR	bright, alert, and responsive	hpf	high power field
BMBT	buccal mucosal bleeding time	HR	heart rate
bpm	beats per minute	IBP	invasive blood pressure
BUN	blood urea nitrogen	IFA	indirect fluorescent antibody
°C	degree Celsius	IT	intratracheal
Ca	Calcium	IM	intramuscular
C1, C2...	cervical vertebrae	IN	intranasal
C/M	castrated male	IO	intraosseous
CBC	complete blood count	IP	intraperitoneal
cc	cubic centimeter	ICe	intracoelomic
cm	centimeter	IV	intravenous
CNS	central nervous system	kg	kilogram
CO ₂	carbon dioxide	kVp	peak kilovoltage
CPK	creatinine phosphokinase	L1, L2...	lumbar vertebrae
CPR	cardiopulmonary	L	liter
resuscitation		lpf	low power field
CRI	constant rate infusion	m	meter
CRT	capillary refill time	mAs	milliamperere per second
CSF	cerebrospinal fluid	mm	millimeter
CT	computed tomography	MM	mucus membranes
d	day	mmHg	millimeter of mercury
dl	deciliter	M/N	male/neutered
DNA	deoxyribonucleic acid	MCH	mean corpuscular
ECG/EKG	electrocardiogram or	hemoglobin	
electrocardiograph		MCHC	mean corpuscular
EDTA	ethylenediaminetetraacetic	hemoglobin concentration	
acid		MCV	mean corpuscular volume
ELISA	enzyme-linked	min	minute
immunosorbent assay		mg	milligrams
ET	endotracheal	mL	milliliter
ETCO ₂	end-tidal carbon dioxide	MMOL/L	millimole per liter
EO	Ethelene Oxide	MRI	magnetic resonance imaging
°F	degree Fahrenheit	NPO	nothing by mouth (nil per os)
F/S	female/spayed	NIBP	non-invasive blood pressure
FeLV	feline leukemia virus		

NSAID	non-steroidal anti-inflammatory drug	rDVM	referring doctor of veterinary medicine
NSF	no significant findings	RER	resting energy requirement
O ₂	oxygen	RNA	ribonucleic acid
OD	right eye (oculus dexter)	RR	respiration rate
OS	left eye (oculus sinister)	Rx	take, receive – used to indicate a prescription or treatment
OU	both eyes	SC	subcutaneous
PCV	packed cell volume	sec	second
PE	physical exam	SpO ₂	peripheral capillary oxygen saturation
pH	measure of the acidity of a solution	T	temperature
PO	per os	T1, T2...	thoracic vertebrae
POTZ	preferred optimal temp. zone	T ₄	thyroxine
PRN	pro-re nata	T ₃	triiodothyronine
PT	prothrombin time	TP	total proteins
Q	every	TS	total solids
QAR	quiet, alert, and responsive	TSH	thyroid stimulating hormone
QD	once daily	UA	urine analysis
Q72H	every 72 hours	UV	ultraviolet
Q48H	every 48 hours	WBC	white blood cell
Q24H	every 24 hours	wk	week
Q12H	every 12 hours	WNL	within normal limits
Q8H	every 8 hours	wt	weight
Q4H	every 4 hours	yr	year
RBC	red blood cell		

AVTCP Production Medicine Skills List

*A minimum of 80% of the skills must be mastered.

**Mastery is defined as to be able to perform a task consistently and competently without being coached or directed no less than 4 times.

*Skills must be cross referenced in the case logs.

*Skills may not be claimed and will not be counted if performed on deceased/cadaver animals.

Skill	Case Log Number(s)	Signature of Veterinarian or VTS
General Nursing		
1. Perform a complete physical exam (assess peripheral pulses, i.d. abnormal heart/lung sounds, ruminations, body condition score)		
2. Efficient and accurate calculation of drug dosages		
3. Mastery of venipuncture in healthy and sick and/or debilitated animals		
4. Mastery of venipuncture via jugular and tail vein		
5. Mastery of urine sample collection		
6. Mastery of milk sample collection		
7. Proficiency in cattle restraint (running a chute, recognizing a choke situation, mastering knots for restraint such as a bowline, tomfools or halter)		
8. Mastery of IV catheter placement		
9. Proficient in proper placement of an esophageal feeder		
10. Advanced knowledge of fluid therapy in dehydrated animals		
11. Mastery of proper wound management techniques and proper applications of bandages, splints and casts		
12. Advanced knowledge of grains and forages		
13. Proficiency in age determination by animal's teeth		
Pharmacology		
14. Extensive knowledge of groups of drugs, their mechanisms, clinically relevant side effects, and accurate evaluation of therapeutic responses		
15. Extensive knowledge of types of vaccines, their immunological mechanisms and adverse vaccine reactions		
16. Extensive knowledge of estrus synchronization products and their appropriate uses.		
17. Proficiency in administration of enteral medications using a dose syringe, balling gun, and/or stomach tube		
Practice Management		
18. Supervise the creation and maintenance of all appropriate facility records and logs in compliance with regulatory guidelines (e.g., x-ray, surgery, anesthesia, laboratory, controlled substances)		
19. Instruct and supervise staff in the accurate recording of medical information		

20. Proficiency in the management of inventory control		
21. Establish and supervise the maintenance of appropriate sanitation and nosocomial protocols for a veterinary facility including animal handling areas and necropsy areas		
22. Outstanding interpersonal and public relations skills		
Anesthesia/ Analgesia		
23. Proficient and efficient dose calculations of appropriate drugs		
24. Mastery of endotracheal intubation and tube placement in routine and emergent situations		
25. Monitor and evaluate patient status and anesthetic depth using established parameters such as outward involuntary physical responses (i.e., jaw tone, palpebral reflex, eye position), blood pressure, heart rate, and respiratory rate		
26. Set up, maintain, and troubleshoot an anesthesia machine (oxygen tank, vaporizer, CO2 absorbent)		
27. Perform a caudal epidural and a variety of local blocks for various surgeries		
Surgical Nursing		
28. Extensive knowledge of and ability to set up necessary equipment and supplies for a variety of surgeries		
29. Advanced knowledge of proper care of surgical instruments and equipment		
30. Proficiency in identification and advanced knowledge of appropriate and relevant suture material		
31. Proficiency in the recognition of dystocia and identification of its stages		
32. Proficiency in the recognition of prolapse emergencies (rectal vs. vaginal)		
33. Supervise staff in proper surgical supply sterilization procedures (autoclave, ethylene oxide)		
Laboratory		
34. Mastery of all basic laboratory testing (CBC, fibrinogen, UA, fecal analysis, external parasite analysis, basic cytology, blood smear evaluation) and evaluation of results.		
35. Utilize, maintain, and troubleshoot in-house hematology and clinical chemistry analyzers and evaluate results		
36. Knowledge of and properly perform a variety of IgG tests		
37. Properly collect, handle, and perform basic microbiology procedures (Perform biochemical tests to identify bacteria and perform a sensitivity)		
38. Knowledge of a BSE according to the Society of Theriogenology standards (collecting a semen sample, preparing, and examining a slide for motility and morphology and thorough knowledge of normal sperm cells and their defects)		
39. Properly perform a CMT		
Diagnostic Imaging		
40. Mastery of basic radiology procedures and implementing and observing all safety rules.		

41. Demonstrate accuracy and efficiency in positioning patients for a variety of radiographic studies (thorax, abdomen, spine, skull, extremity, shoulder, pelvis)		
42. Accurate and consistent evaluation and modification of radiographic technique		
43. Demonstrate the ability to set up, maintain equipment, and assist with or perform ultrasonography		
Necropsy Procedures		
44. Properly perform a correct necropsy for rendering		
45. Properly collect and/or handle and submit necropsy samples for histopathology		
46. Knowledge of correct euthanasia procedures for rendering		

The AVTCP reserves the right to verify any information that the candidate provides in the application packet

The AVTCP requires that a licensed veterinarian or a Veterinary Technician Specialist who has mastered the skill, attest to your ability to perform the task. Mastery is defined as being able to perform the task safely, with a high degree success, and without being coached or prompted. Mastery requires having performed the task in a wide variety of patients and situations. The applicant must have mastered a minimum of 80% of the skills listed. All skills mastered must be demonstrated in the case logs and reports. The use of cadavers, clinic animals, or personal pets is unacceptable.

I, the undersigned, declare that I have read the entire AVTCP application packet. I further attest that the above-named applicant has achieved the AVTCP definition of mastery for the above skills that are marked with my signature.

_____/_____
Signature Printed Name and Degree

_____/_____
Signature Printed Name and Degree

_____/_____
Signature Printed Name and Degree

_____/_____
Signature Printed Name and Degree

_____/_____
Signature Printed Name and Degree

Please provide the names and credentials of all persons who have signed this form attesting to your mastery of advanced skills in clinical practice.

AVTCP Production Medicine Knowledge List

Beef Cattle Knowledge List

Pharmacology:

- Controlled Drugs
- Anthelmintic
- Vaccines
 - Knowledge/reasons of vaccine failures

Reproduction:

- Breeding Soundness Exam
 - Following the Therio Society guidelines for a BSE, passing criteria
- Calvings/Dystocias
 - Calving-Related Conditions
 - Prolapsed Uterus
 - Retained Placenta
- Estrus Synchronization Programs

Biosecurity:

- Zoonotic Diseases/Biosecurity Procedures
 - Foot and Mouth Disease
 - Rabies
 - BSE
 - Anthrax

Clinical Skills:

- BCS
- Cattle Handling
- Knot Tying
- Recognition of Equipment
 - Balling gun
 - OB Equipment
 - Dehorning Equipment

Digestive Conditions:

- Bloat
- Abomasal Ulcers
- Grain Overload
- Grass Tetany
- Salmonella
- Clostridium

Ocular Conditions:

- Bovine Keratoconjunctivitis
- Ocular Squamous Cell Carcinoma

Viral Diseases:

- BVD
- Johnes

Urogenital Disorders:

- Pyelonephritis
- Urolithiasis

- Freemartin
- Cryptorchidism
- Fibropapilloma
- Deviation of the penis or fracture
- Prolapsed prepuce
- Scrotal hernia
- Orchitis/frostbite

Bacterial Diseases:

- Tetanus
- Botulism
- Black Leg

Respiratory Diseases:

- IBR
- Pasteurella
- Aspiration Pneumonia
- Atypical interstitial pneumonia (Bovine Emphysema)

Musculoskeletal Diseases:

- Bovine Lameness/arthritis
- Downer Cow
- Foot Rot
- Fractures
- Stifle injuries

Parasites:

- Internal and External

Sheep/Goat Knowledge List

Necropsy Procedures:

- Sheep rendering procedures
- Collect samples and shipping procedures
- samples for scrapie surveillance

Nutrition:

- Feeding Problems
- Urolithiasis, Hypocalcemia, Hypomagnesemia, Copper Toxicity, Nutritional Myodegeneration

Clinical Skills:

- Ages for permanent teeth

Diseases/Biosecurity:

- Contagious Ecthyma
- Blue Tongue
- Ringworm
- Toxoplasmosis
- Q Fever

- Scrapie
- Ovine Progressive Pneumonia
- Caprine Arthritis and Encephalitis
- Caseous Lymphadenitis
- Tetanus
- Johne

Internal Parasites:

- Treatment & Control Programs
- FAMACHA Guidelines
 - Anthelmintic Resistance
 - Alternative Control Methods (nutrition, pasture rotation etc.)
- Diagnostics
 - Fecal Exam Methods (McMasters, Modified Wisconsin)

Pharmacology:

- Administer enteral medications (Stomach tube/ Nasogastric tube)
- Fluid Therapy
- Anti-inflammatories
- Antibiotics
- Controlled Drugs
- Disinfectants

Reproduction:

- Estrus Cycle
- Estrus Synchronization Protocols/ AI
- Lambing Complications/ Ring Womb/ Pregnancy Toxemia

Urogenital Conditions:

- Uroliths
 - Types and prognosis

Gastrointestinal Disorders:

- Grass Tetany
- Bloat
- Clostridium perfringens*
- Acidosis

Swine Knowledge Lists

Biosecurity:

Pig flow: all in, all out vs continuous flow
Limiting visitors – shower in, shower out when possible
Have farm specific livestock
Proper feed storage

Environment:

Temperature for various stages of production
Water flow rates for various stages of production
Acceptable ammonia levels and knowledge of testing equipment

Vaccination and Deworming:

Proper administration technique
Institute a proper vaccine protocol

Diseases:

PRRS
E. Coli
Clostridium
Bordetella
Mycoplasma
Strep Suis
Greasy pig disease
Erysipelas
Salmonellosis
Circovirus
Parvovirus
Pseudorabies
Transmissible gastroenteritis
Porcine Stress Syndrome
Swine pox
Erythema Multiforme (Dippity Pig Syndrome)
Swine Influenza
PED Virus
Brucellosis
African Swine Fever

Laboratory Procedures:

Sample Collection
Venipuncture
Necropsy – both procedure and samples to be collected
Fecal floatation

Piglet Processing:

Iron supplementation
Tails docking

Knowledge of appropriate ear notching techniques
Castration
Clipping needle teeth

PQA:

Extra-label drug use
Animal Treatment Record
Proper antibiotic use with published withdrawal times
Knowledge of humane euthanasia protocols
VFD

Dairy Cattle Knowledge Lists

Biosecurity:

Knowledge of closed vs open systems
Knowledge of information needed from source herds
Knowledge of testing/isolation procedures for new purchases

Calf Management:

Neonatal care – colostrum, naval care, total proteins
Colostrum management – quality, pasteurization, shelf life
Vaccine protocols
Dehorning
Supernumerary teat removal
Neonatal diseases –

- Septicemia – E. Coli, Salmonella
- Diarrhea - GI - Rotavirus, Coronavirus, Salmonella, Coccidia, E. Coli, Clostridium
- Pneumonia - Respiratory – BRD, Pasteurella, Mycoplasma

Production/Nutritional Diseases:

Acidosis
Laminitis
Ketosis
Displaced Abomasum
Fatty Liver

Infectious Diseases:

Anaplasmosis
Bovine Viral Diarrhea
Brucellosis
Leptospirosis
Vibriosis
Tuberculosis
Rabies
Bovine Spongiform Encephalopathy

Bovine Leukemia Virus
Mycoplasma
Neospora
Johnes' Disease

Respiratory Diseases:

Bovine Respiratory Disease Syndrome
Parainfluenza
Pasteurella
Bovine Syncytial Virus

Gastrointestinal Conditions:

Bloat
Salmonella
Clostridium
HGE
Hardware Disease
Obstructions
Cecal Torsions

Milk Quality:

Antibiotic Residues
Subclinical Mastitis and Somatic Cell Counts
Effect of mastitis on milk production
CMT (California Mastitis Test)
Understanding the lactation curve
Bacterial Pathogens found in milk
Milk Culturing Procedures
Bulk Tank Cultures/ Pasteurizer Cultures

Reproduction:

Metritis
Retained Placenta
Milk Fever (Parturient Hypocalcemia)
Knowledge of various Estrus Synchronization protocols

Management:

Common antibiotics and associated withdrawals
Knowledge of extra label drug use regulations
VFD
BCS
Dry Cow Care
Transitional cow management
Knowledge of fresh cow monitoring

Production Medicine Suggested Reading List

- **Sheep, Goat, and Cervid Medicine, 3rd Edition.** D.G. Pugh, A.N. Baird, M.A. Edmonston, T. Passler. Elsevier. ISBN: 9780323624640.
- **Current Therapy In Large Animal Theriogenology, 2nd.** Robert S. Youngquist, Walter R. Threlfall. Saunders. ISBN: 13-978-0-7216-9323-1.
- **Beef Cattle, 8th Edition.** A.L. Neumann, Keith S. Lusby. Wiley. ISBN: 0-471-82535-2.
- **Beef Practice: Cow-Calf Production Medicine.** Peter J. Chenoweth, Michael W. Sanderson. Blackwell. ISBN: 0-8138-1402-7
- **Factors Affecting Calf Crop.** Michael J. Fields, Robert S. Sand. CRC. ISBN: ISBN: 9780849387548.
- **Large Animal Clinical Nutrition.** Johnathan M. Naylor, Sarah L. Ralston. Mosby. ISBN: 0-8016-2902-0
- **Large Animal Internal Medicine, 6th Edition.** Bradford P. Smith. Mosby. ISBN: 978-0-323-55445.
- **Veterinary Medicine: a textbook of the diseases of cattle, horses, sheep, pigs, and goats, 11th Edition.** P.D. Constable, K.W. Hinchcliff, S.H. Done, W. Grunberg ISBN: 9780702052460.
- **Veterinary Laboratory Medicine: Clinical Pathology, 3rd Edition.** J. Robert Duncan, Keith W. Prasse, Edward A. Mahaffey. Iowa State University Press. ISBN: 0-8138-1917-2.
- **Laboratory Procedures for Veterinary Technicians, 3rd Edition.** Paul W. Pratt. Mosby. ISBN: 0-8151-73261.
- **Animal Restraint for Veterinary Professionals, 2nd Edition** C.C. Sheldon, Teresa Sansthagen, James A. Topel. Mosby. ISBN: 13-978-0-323-03465-4.
- **Sheep Production Handbook, 8th Edition.** American Sheep Industry Association: ISBN-10: 0974285706.
- **Large Animal Clinical Procedures for Veterinary Technicians.** Elizabeth A. Hanie. Elsevier Mosby. 2006. ISBN: 0-323-02855-1
- **Color Atlas of Diseases and Disorders of Cattle, 3rd Edition.** Roger W. Blowey and A. David Weaver. Mosby. 2003. ISBN: 0 7234 3205 8
- **Current Veterinary Therapy: Food Animal Practice, 5th Edition.** David E. Anderson and D. Michael Rings. Saunders Elsevier. 2009. ISBN: 978-1-4160- 3591-6
- **Farm Animal Surgery, 2nd Edition.** Susan L. Fubini and Norm G. Ducharme. Saunders. 2004. ISBN: 978-0-7216-9062-9