The Academy of Veterinary Technicians in Clinical Practice

ECA Application Packet
2026 Case Year
January 1, 2026-December 31, 2026

SUBMISSION GUIDELINES

The application year begins January1, 2026 and ends at 11:59pm December 31st, 2026. 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, November 1st, 2025. All of the Pre-Application is to be completed by filling out the online forms available by clicking on the provided links on the "Application Information" page of our website. Form links will be made active August 1st, 2025.

Once the Pre-Application has been accepted, applicants will receive an invitation to place their Final Application documents in the secure AVTCP Drobox. The notification and invitation will be sent no later than December 31st, 2025.

Final Application submissions, including all applicable documents, attachments, and letters of recommendation, will be accepted up to 11:59pm PST, December 31st, 2026. 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, maiden name, 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.

AVTCP Pre-Application
2026 Application Year
Due November 1, 2025

The Pre-Application will be available by selecting the links on our website from August 1 through October 31 of each year. During other times of the year, the links will not be available as we only accept Pre-Applications during that window. Below is all of the information that is required to complete the Pre-Application.

Please note:

- While filling out the form online, pressing the **ENTER** key will submit the form, and each form submission can only be made **once**. Please only submit your forms when they are complete as **additions/edits will not be accepted.**
- You will receive a confirmation from Wufoo indicating the form you submitted. Please save this for your records.
- If you have applied for or received a VTS in another academy within the prior 5 years of the AVTCP application year, you will not be eligible. You must wait 5 years after applying for and/or receiving a VTS to apply for AVTCP.

LETTERS OF RECOMMENDATION (LOR):

- LOR are not due until the Final Application is due, however, there is a requirement in the Pre-Application that applicants provide the names and qualifications of the 2 people applicants plan on asking to write their LOR.
- There must be two LOR- please do not have more than 2 submitted as only the first two will be accepted.
- At least 1 letter must be from one of the following:
    - An AVTCP academy member
    - Any other NAVTA approved VTS academy member
    - A Certified Veterinary Pain Practitioner (CVPP)
    - A Veterinary Diplomate of any AVMA recognized veterinary specialty organization (RVSO)
- The second LOR can be from any of the above OR a Doctor of Veterinary Medicine (DVM, VMD, or international equivalent).
- The specialty of the veterinarian/s or the technician/s do NOT have to be the same as the chosen specialty of the applicant.
- LOR must be from people who have directly worked with and observed the applicant's work technically and professionally; NOT from a school setting (like a teacher) or volunteer experience.
- LOR must be from people who have worked with and observed the applicant within the 7-years prior to the application due date.
- LOR from any family members or personal friends will NOT be accepted.
- LOR should describe the applicant's knowledge and technical ability as well as what makes them stand out from non-VTS credentialed technicians.
- LOR must be hand-signed and submitted directly using the link on the AVTCP website's "Application Information" page by the person writing the LOR.

- If the LOR addresses the applicant with a different name than the applicant has provided, the letter may not be accepted. Applicants must inform AVTCP of all potential prior names, nick names, surnames, etc. or risk rejection.
- Applicants will be notified upon receipt of each LOR received by AVTCP. Receipt does NOT mean acceptable or positive, simply that it was received.
    - If the LOR qualifications do not meet the requirements, but the rest of the Pre-Application does, applicants will be informed that while their Pre-Application has been accepted, their LOR do not qualify and they must rectify that problem before the Final Application is due.

ACCEPTANCE OF KNOWLEDGE LIST AND DECLARATION OF SPECIALTY:

- Applicants must read and verify accepting the following statement: **A qualified candidate will understand and recognize the disease states and conditions contained in the knowledge list which can be found in the Final Application of each sub-category. The knowledge list can be used as an aid in preparation for sitting the examination in your clinical practice category. The topics listed are in addition to your skills list, and though some overlap will occur, any topic that appears on either list is suitable information for examination. However, unlike the skills list, you are not required to provide proof of competence for the knowledge lists. The examination will demonstrate this information.**

CONTINUING EDUCATION (CE):

- Fifty (50) hours minimum of approved CE must be completed within five (5) years of the Pre-Application due date. Applicants are encouraged to submit > 50 hours of CE.
- A minimum of 25% of the total accepted CE must be either in-person OR via a live, interactive virtual webinar.
- A minimum of 75% (37.5 hours) directly relating to the applicant's specialty practice category is required.
    - E.G.: If applicant is applying for a VTS in Feline medicine, 37.5 hours of the 50 hours required must be topics directly relating to feline medicine.
- Of the 25% (12.5) hours that may not be directly related to the specialty, the 12.5 hours still must still be applicable to the chosen specialty.
    - E.G.: A canine/feline applicant may not use fish medicine CE for the application. Topics that may be acceptable would include management, behavior, ethics, etc.
- CE must be RACE certified or its equivalent AND:
    - All instructors of CE are required to be one of the following:
        - An AVMA/ABVS Diplomate
        - A European Board of Veterinary Specialization Diplomate
        - A Veterinary Technician Specialist (specialty recognized by NAVTA/CVTS)
        - A Certified Veterinary Pain Practitioner (CVPP)
        - A Certified Veterinary Practice Manager (CVPM)

        - The RECOVER Basic and Advanced Life Support online certification courses are also acceptable. You must indicate speaker credentials (e.g. DABVP (Avian), VTS (ECC), etc) for approval.
- Lectures are to be listed using the provided template (on the website)
- Applicants cannot use their own lectures for CE credit.
- All CE must be in advanced clinical practice. CE should be well-rounded and comprised of several domains. If CE is significantly from one domain, it will NOT be accepted.
    - E.G.: If a canine/feline applicant has attended 40 out of 50 hours in dentistry topics, the CE portion of the application will be rejected, resulting in a rejection of the entire application.
- Duplicate/repeated CE will not be accepted.
- Applicant's name should be indicated on all CE certificates.
- Production Medicine applicants are encouraged to review the Production Medicine application for specific CE requirements/guidelines.

PROFESSIONAL HISTORY AND EMPLOYMENT DECLARATION:

- If the applicant works in a state or province that offers credentialing, the applicant must obtain those credentials and work as a credentialed veterinary technician for a minimum of five (5) years and 10,000 hours in Clinical Practice prior to applying.
- If the applicant works in a state or province that does not offer credentialing, the applicant must pass the Veterinary Technician National Examination (VTNE) prior to accruing the minimum of five (5) years and 10,000 hours of work experience.
- Credentials in each state/province applicant worked must be maintained throughout the entire period prior to and including the application for which the applicant is citing hours on this application. Proof of credentialing in each state worked for each year is required.
    - In states that do not provide a registration/license certificate to upload, AVTCP will accept a letter of good standing, receipt of registration payment, or a screenshot of a website showing the history of payments for prior/current years.
- Applicants must demonstrate work experience for a minimum of five (5) years and 10,000 hours in veterinary Clinical Practice prior to the start of the application year. This can include work outside of general practice such as in ECC, dermatology, or surgery.
- Of the required 10,000 hours, applicants must work a minimum of 7,500 hours (75% of the time) with the taxa/species they are applying for prior to the start of the application year. The other 2500 hours (25%) can be from working with other taxa or species within Clinical Practice.
- During the application year, applicants must work a minimum of 75% of their time on the floor within the specialty they are applying.
- Hours worked in or taken from receptionist work, management, teaching, zoo medicine, laboratory medicine, shelter medicine, or wildlife medicine will not be accepted for any portion of the applicable hours.
- All experience/10,000 hours must be completed within seven (7) years of the start of the application year.
- All work hours submitted for consideration as part of the application must be performed as a credentialed veterinary technician or veterinary nurse.

- Applicants may submit up to 250 hours of overtime per year, however, the requirement of working for a minimum of 5 years as a credentialed technician/nurse working in the chosen specialty supersedes the hours worked in the event an applicant works more than 10,000 hours in less than 5 years.
- Applicants may only apply for one NAVTA approved VTS academy at a time. Applicants must wait a minimum of five years between applications for specialties.
- Applicants must use the spreadsheet provided to calculate your hours and submit with your application.
- Applicants must also attach a professional curriculum vitae to the application.

SIGNED WAIVER:

Each applicant is required to declare their approval for the following statement by signature (This will be signed via the forms available when applying online):

I hereby submit my credentials to the Academy of Veterinary Technicians in Clinical Practice (AVTCP) for consideration for examination in accordance with its rules and enclose the required application fee. I agree that prior to or after my examination, the AVTCP Board of Regents may investigate my standing as a technician, including my reputation for complying with the standards of ethics of the profession. I understand and agree that the application fee shall be nonrefundable.

I agree to abide by the decisions of the Board of Regents and thereby voluntarily release, discharge, waive and relinquish any and all claims, actions, or causes of actions against the Academy of Veterinary Technicians in Clinical Practice, the Board of Regents, and each member, regent, officer, examiner, and agent of AVTCP or the Board of Regents (collectively the "Released Parties", individually a "Released Party"), and hereby voluntarily release and discharge each of the Released Parties from any and all liability whatsoever, arising out of or in any way related to any decision or act made by a Released Party in connection with my application to AVTCP, the AVTCP examination, the grades on such examination and/or the grant or issuance of, or failure to grant or issue, any certificate (each, an "AVTCP Decision"). I hereby agree to defend, indemnify and hold harmless each Released Party from and against any and all claims, actions, causes of action, demands, costs, including but not limited to court costs and attorney's fees, and liabilities brought by or for me or prosecuted or otherwise pursued for my benefit, whether known or unknown at this time, arising out of or in any way related to an AVTCP decision. I further agree that any certificate which may be granted and issued to me by AVTCP shall be and remain the property of AVTCP.

I understand that as part of the application submitted herewith, I am being asked to suggest issues, questions and ideas which AVTCP can include in future examinations. I hereby assign to AVTCP all right, title and interest in and to any and all such issues, questions and ideas which I may submit to AVTCP now or in the future.

I certify that all information provided by me on the application submitted herewith is true and correct. I acknowledge that I have read, understand, and agree to abide by the terms and conditions stated above.

AVTCP FINAL APPLICATION
2026 Application Year
Due December 31st, 2026

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 capitol 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

☐ Anesthesia and Analgesia
☐ Diagnostic & Laboratory
☐ Pharmacology
☐ Surgical Nursing
☐ Behavior
☐ Body Mechanics & Systems
☐ Diseases
☐ Animal Care & Treatment
☐ Dentistry
☐ 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.
- Exotic Companion Animal case logs must have at least 30% mammals, 30% reptiles, and 30% birds. Canine/feline applicants must have at least 30% canine, and 30% feline.
- Cases submitted must take place between January1 and December 31 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.
    - Once a skill is performed and mastered, it should be noted on the skills list once and witnessed as instructed.
    - The corresponding number of the skill should be indicated in parentheses after describing the skill within the log. While you should only cite each skill once on the skill sheet, please indicate the skill number in every log after each time you perform it.
- Please be sure to specify details such as sites/locations such as IV catheter placement and size, venipuncture site, drug administration route, etc.
- The AVTCP case log outline provided must be utilized.
- Each case log may be no 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 exceptional 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 Proviable™.
- 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 upon first mention unless doses changes.*

AVTCP CASE LOG - Format

Applicant's name:_____

Case log #_____Date_____Patient ID_____

Species/Breed_____Age____Sex____Wt___(kg) BCS_____Pain Score_____

Presenting Complaint_____

Assessment_____

_____

Treatment Plan_____

_____

Skills & Procedures Applicant Performed_____

_____

_____

_____

Diagnosis & Outcome_____

_____

_____

AVTCP CASE REPORTS – Instructions/Guidelines

- Four (4) complete case reports are required and must be submitted in separate WORD documents.
- The case report must correspond with a case log.
- Reports may not exceed five (5) pages each, 1" margins, Times New Roman 10pt., and double-spaced. It is strongly recommended that applicants utilize as much of the 5 pages as possible by using the space to demonstrate their expertise.
- Abbreviations should be expanded on first mention if not on AVTCP's acceptable abbreviation list in each case report.
- 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, knowledge base, critical thinking, therapy instituted by the technician, goals of care and therapy, and the technician's role in the management of 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** (demonstration of a clear understanding of the disease/condition and explanation of the relevant anatomy, pathology and pathophysiology).
    - **Diagnostics** (explanation of diagnostics including reason for diagnostics, role in performing diagnostics, demonstrating knowledge of both normal & abnormal results of diagnostics, and nursing response to diagnostics).
    - **Nursing care and therapy** (explanation of goals of nursing care and therapy and role in care).
    - **Pharmacology** (demonstraton of a strong grasp of pharmaceuticals used including all areas of treatment, anesthesia/analgesia, mastering the role of calculations, administration of treatments, and explanations of the uses of the medications).
    - **Diversity of cases** (each report should represent a different discipline such as one behavior case, one dental case, one surgical case, and different species where applicable to demonstrate a varied breadth of knowledge, skill, and experience in clinical practice).
- Appendices may be included if necessary/desired (ECG tracings, chemotherapy protocols, radiology reports, etc.) and are not included as part of the five-page maximum.
- Reports should be written in 3rd person with exceptional spelling and grammar.
- Plagiarism will result in immediate rejection. The use of references is encouraged and will not count as part of the 5-page limit.
- 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 Proviable™.
- 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 upon first mention unless doses changes.*
- Any attached laboratory reports may be reported in any unit as long as the report recognizes and indicates relevant normal/abnormal values.

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

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; current 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
ACT	activated clotting time
aPTT	activated partial thromboplastin time
ASA	American Society of Anesthesiologists
AS	left ear
AD	right ear
AU	both ears
BAR	bright, alert, and responsive
BMBT	buccal mucosal bleeding time
bpm	beats per minute
BUN	blood urea nitrogen
°C	degree Celsius
Ca	Calcium
C1, C2…	cervical vertebrae
C/M	castrated male
CBC	complete blood count
cc	cubic centimeter
cm	centimeter
CNS	central nervous system
CO_2	carbon dioxide
CPK	creatinine phosphokinase
CPR	cardiopulmonary resuscitation
CRI	constant rate infusion
CRT	capillary refill time
CSF	cerebrospinal fluid
CT	computed tomography
d	day
dl	deciliter
DNA	deoxyribonucleic acid
ECG/EKG	electrocardiogram or electrocardiograph
EDTA	ethylenediaminetetraacetic acid
ELISA	enzyme-linked immunosorbent assay
ET	endotracheal
$ETCO_2$	end-tidal carbon dioxide
EO	Ethelene Oxide
°F	degree Fahrenheit
F/S	female/spayed
FeLV	feline leukemia virus
FIP	feline infectious peritonitis
FIV	feline immunodeficiency virus
g	gram(s)
g	gauge
gr	grain(s)
h/hr	hour(s)
Hct	hematocrit
Hgb	hemoglobin
hpf	high power field
HR	heart rate
IBP	invasive blood pressure
IFA	indirect fluorescent antibody
IT	intratracheal
IM	intramuscular
IN	intranasal
IO	intraosseous
IP	intraperitoneal
ICe	intracoelomic
IV	intravenous
kg	kilogram
kVp	peak kilovoltage
L1, L2…	lumbar vertebrae
L	liter
lpf	low power field
m	meter
mAs	milliampere per second
mm	millimeter
MM	mucus membranes
mmHg	millimeter of mercury
M/N	male/neutered
MCH	mean corpuscular hemoglobin
MCHC	mean corpuscular hemoglobin concentration
MCV	mean corpuscular volume
min	minute
mg	milligrams
mL	milliliter
MMOL/L	millimole per liter
MRI	magnetic resonance imaging
NPO	nothing by mouth (nil per os)
NIBP	non-invasive blood pressure
NSAID	non-steroidal anti-inflammatory drug
NSF	no significant findings

O_2	oxygen
OD	right eye (oculus dexter)
OS	left eye (oculus sinister)
OU	both eyes
PCV	packed cell volume
PE	physical exam
pH	measure of the acidity of a solution
PO	per os
POTZ	preferred optimal temp. zone
PRN	pro-re nata
PT	prothrombin time
Q	every
QAR	quiet, alert, and responsive
QD	once daily
Q72H	every 72 hours
Q48H	every 48 hours
Q24H	every 24 hours
Q12H	every 12 hours
Q8H	every 8 hours
Q4H	every 4 hours
RBC	red blood cell
rDVM	referring doctor of veterinary medicine
RER	resting energy requirement
RNA	ribonucleic acid
RR	respiration rate
Rx	take, receive – used to indicate a prescription or treatment
SC	subcutaneous
sec	second
SpO2	peripheral capillary oxygen saturation
T	temperature
T1, T2…	thoracic vertebrae
T_4	thyroxine
T_3	triiodothyronine
TP	total proteins
TS	total solids
TSH	thyroid stimulating hormone
UA	urine analysis
UV	ultraviolet
WBC	white blood cell
wk	week
WNL	within normal limits
wt	weight
yr	year

AVTCP Exotic Companion Animal Skills List 2023-24

- The AVTCP defines "mastery" as being able to perform the task safely, with a high degree of success, and without being coached in a wide variety of patients and situations.
- A minimum of 80% of the skills must be mastered.
- Applicants should only indicate one instance of mastery that is noted in one case log per skill. However, it is recommended to indicate skills in each log each time the skill is performed. For example, for skill #2, applicants should only indicate on the skills list that they recognized shock in a patient in one case log. But as the applicant is writing up their logs, each time they recognized shock in a patient, they should indicate (2) after each time in each log. (Part of scoring includes giving points when applicants perform skills so they should cite as many as they can.)
- Items denoted with an ** are considered mandatory skills and must be completed.
- Use of cadavers, clinic animals, or personal pets is unacceptable.
- The AVTCP requires that a licensed veterinarian or a Veterinary Technician Specialist who has mastered the skill themselves, attest to the applicant's ability to perform the task.
- Signature of Veterinarian or VTS may not be a family member of applicant.

Husbandry Requirements

	Skill	Case Log Number(s)	Vet or VTS Signature
1.	Ability to recognize and identify different species of both common and rare avian and exotic pets		
2.	Mastery of husbandry requirements for the most common avian and exotic species including, but not limited to nutritional requirements, caging/housing, substrate, temperatures, humidity, lighting, grooming, bathing, foraging, enrichment, etc.		
3.	Expertise in the application of husbandry requirements in the hospital setting to maximize patient care and comfort		
4.	Proficiency in the education of clients and coworkers in the proper care of individual species of avian and exotic pets		

General Nursing

	Skill	Case Log Number(s)	Vet or VTS Signature
5.	Perform a comprehensive physical exam: identify normal/abnormal eyes, ears, nares, oral cavity, dentition, vent, choana, heart and lung sounds, pain assessment, body condition score, hydration status		
6.	Recognize signs of respiratory failure and shock		
7.	Accurately and efficiently triage patients presenting for emergent conditions		
8.	In association with other medical team members, administer CPR, evaluate effectiveness, and troubleshoot therapy		
9.	Thorough knowledge of substances that, when ingested, result in toxicity		
10.	Efficient and accurate calculation of drug doses, solutions, and IV fluid rates		
11.	Demonstrate thorough knowledge of metric conversions		

12.	Mastery of venipuncture in healthy, sick, and/or debilitated animals		
13	Mastery of jugular and peripheral IV catheter placement in a variety of sites in healthy sick, and/or debilitated animals		
14.	Mastery of intraosseous catheterization in a variety of sites in healthy, sick, and/or debilitated animals		
15.	Set up and maintain an IV fluid pump and syringe pump and be able to troubleshoot equipment malfunction		
16.	Mastery of various methods of centesis (cysto, percutaneous, and abdominal/coelomic)		
17.	Proficiency in placement and maintenance of a urinary catheter in ferrets, rabbits, and guinea pigs (male and female)		
18.	Proper placement and/or maintenance of at least two (2) of the following types of enteral feeding tubes: nasogastric, esophageal, gastric, jejunal, crop/proventricular		
19.	Properly administer blood products, including obtaining donor blood and monitoring techniques throughout the transfusion		
20.	Set up and perform non-invasive blood pressure monitoring, evaluate blood pressure status, and troubleshoot equipment malfunction		
21.	Set up and monitor heart rate and rhythm with ECG monitoring, recognize normal and abnormal tracings, and troubleshoot equipment malfunction		
22.	Set up a pulse oximeter, evaluate oxygen status, and troubleshoot equipment malfunction		
23.	Administration of fluids and medications via various parenteral administration sites (IM, SC, ICe, IV, IO)		

Anesthesia/Analgesia

	SKILL	**Case Log Number(s)**	**Vet or VTS Signature**
24.	Assign appropriate ASA status after reviewing patient history, PE, and diagnostic results in collaboration with a veterinarian		
25.	In collaboration with a veterinarian, determine appropriate anesthetic and peri-anesthetic protocols to provide effective pain management and maximum anesthetic safety and effectiveness		
26.	Perform local and regional nerve blocks		
27.	Evaluate the effects of common pre-anesthetic, induction, and maintenance drugs		
28.	Evaluate and respond to adverse reactions to and/or complications from pre-anesthetic, induction, and maintenance drugs		
29.	Implement appropriate pre-oxygenation technique and know rationale with regards to species, anemia, etc.		
30.	Mastery of endotracheal intubation and tube placement with understanding of size, length, safe technique, and when to use cuffed vs. non-cuffed tubes in routine and emergent situations		
31.	Thorough knowledge of the risks associated with intubation and the appropriate steps to avoid these risks		

32.	Set up a capnograph end-tidal CO2 monitor, evaluate ventilation status, and troubleshoot equipment malfunction		
33.	Set up a continuous respiratory rate monitor, evaluate respiratory rate status, and troubleshoot equipment malfunction		
34.	Perform manual intermittent positive pressure ventilation with an anesthesia breathing bag and evaluate its effectiveness		
35.	Set up ventilator, calculate appropriate tidal volume and respiratory rate, and troubleshoot machine as needed		
36.	Set up and monitor temperature (esophageal, rectal, external), evaluate patient status, and troubleshoot machine malfunction		
37.	Implement techniques to prevent hypothermia/hyperthermia and resolve these issues by safely and effectively using devices such as warm air blankets, circulating water blankets, IV fluid warmers, radiant heating devices, and incubators pre and post surgically		
38.	Monitor and evaluate patient status and anesthetic depth using established parameters such as outward involuntary physical response (i.e. jaw tone, palpebral reflex, eye position), blood pressure, ECG, pulse oximetry, heart rate, respiratory rate, and ventilation status		
39.	Administer and evaluate the effects of IV fluid (crystalloid and colloid) and blood component therapy during anesthesia		
40.	Ability to assess appropriate extubation time for various species, (such as reptiles versus ferrets) with consideration of regurgitation/aspiration, and emergence from anesthesia		
41.	Set up, maintain, and troubleshoot a non-rebreathing system		
42.	Set up, maintain, and troubleshoot a rebreathing system		
43.	Set up, maintain, and troubleshoot an anesthesia machine (oxygen tank, vaporizer, CO2 absorbent, scavenger system)		
44.	Set up, maintain, and troubleshoot an anesthetic induction chamber		
45.	Set up, maintain, and troubleshoot a waste gas scavenging system		

Surgical Nursing

	Skill	**Case Log Number(s)**	**Vet or VTS Signature**
46.	Mastery of the unique and varied individual surgical nursing requirements of various species (ferrets, small rodents, birds, rabbits, guinea pigs, reptiles, etc.) E.G. scrubbing into surgery, wound care, bandaging wounds, placing splints, etc.		
47.	Extensive knowledge of and ability to set up necessary equipment and supplies for a variety of surgeries (i.e. reproductive tract, GI tract, ophthalmic, orthopedic, soft tissue, rigid and flexible endoscopy, laparoscopy/coeleoscopy) for each species		

48.	Coordinate the process of preparation, safe use, and maintenance of suction equipment, radiosurgery, electrocautery, and laser units		
49.	Coordinate the process of preparation and positioning of patients for a variety of surgical procedures (i.e. reproductive tract, GI tract, ophthalmic, orthopedic, soft tissue, rigid and flexible endoscopy, laparoscopy/coeleoscopy) for each species		
50.	Coordinate pre- and post-operative care of surgical patients		
51.	Maintain a leadership role among staff in the care of surgical instruments		
52.	Maintain a leadership role in staff training for proper surgical sterilization procedures (autoclave, ethylene oxide, glutaraldehyde, etc.).		

Laboratory

	Skill	**Case Log Number(s)**	**Vet or VTS Signature**
53.	Mastery of all basic laboratory testing: PCV, TP, UA, fecal analysis (direct smears, floats, gram stains, acid fast stains), external parasite analysis, basic cytology, blood smear evaluation, and estimated WBC count		
54.	Utilize, maintain, and troubleshoot in-house hematology and clinical chemistry analyzers and evaluate results		
55.	Demonstrate the ability to perform at least 2 different in-house clotting tests (BMBT, ACT, Platelet evaluation, PT, APTT)		
56.	Demonstrate the ability to obtain samples for tests such as, but not limited to, CBC, clinical chemistries, PCR, serology, and virology. This includes: appropriate fasting protocols, correct timing of sample collection, and correct sample collection and handling		
57.	Properly collect, handle, and store samples of excretion, secretion, and effusion for laboratory evaluation		
58.	Properly collect, handle, and submit cytology and samples for laboratory evaluation		
59.	Properly collect, handle, and submit samples for bacterial and fungal culturing		
60.	Properly collect, handle, and submit samples for histopathology		

Diagnostic Imaging

	Skill	**Case Log Number(s)**	**Vet or VTS Signature**
61.	Proficiency in a variety of imaging processes such as radiology, ultrasound, computed tomography, magnetic resonance imaging, and fluoroscopy.		
62.	Coordinate the diagnostic imaging process by directing team members to consistently and efficiently produce images of diagnostic quality.		

63.	Proficiency in evaluating the patient's condition (medical, surgical, behavioral) and adapting the diagnostic imaging to those conditions.		
64.	Demonstrate accuracy and efficiency in positioning patients for a variety of diagnostic imaging studies (thorax, abdomen, spine, skull, extremity, pelvis, dental).		
65.	Accurate and consistent evaluation and modification of diagnostic imaging techniques.		
66.	Perform and/or demonstrate the ability to set up, monitor, and administer contrast studies (i.e. GI studies, double contrast, cystograms, myelograms, fluoroscopy) including the setup of necessary equipment, patient preparation and monitoring, and administration of contrast media.		
67.	Ability to manipulate and properly adjust digital radiographic techniques to provide diagnostic images for various species.		

Dentistry

	Skill	**Case Log Number(s)**	**Vet or VTS Signature**
68.	Thorough knowledge of dental anatomy for all species (rodent, rabbit, ferret, hedgehog, sugar glider, etc.)		
69.	Efficiently perform a comprehensive oral exam		
70.	Readily identify oral pathology and anatomic abnormalities		
71.	Comprehensive knowledge of how to use and care for dental hand instruments and power instruments		
72.	Perform thorough and efficient dental prophylaxis		
73.	Efficiently and consistently produce dental radiographs of diagnostic quality		
74.	Ability to perform and/or assist with rodent/rabbit dental trimming		
75.	Ability to maintain and troubleshoot dental machinery and equipment		

Pharmacology

	Skill	**Case Log Number(s)**	**Vet or VTS Signature**
76.	Extensive knowledge of groups of drugs, their mechanisms, clinically relevant side effects, and accurate evaluation of therapeutic responses		
77.	Extensive knowledge of types of vaccines, their immunological mechanisms, and adverse vaccine reactions		

Behavior

	Skill	Case Log Number(s)	Vet or VTS Signature
78.	Knowledge of basic behavioral learning concepts (i.e. punishment, positive reinforcement, rewards, operant conditioning)		
79.	Ability to recognize appropriate and inappropriate behaviors in several species (birds, rabbits, reptiles, etc.) and provide information to clients regarding current scientifically based techniques of training, management, and behavior modification		
80.	Familiarity with a variety of training tools and their uses		
81.	Train practice staff in recognizing and managing aggressive behavior in the practice setting (i.e. use of proper restraint techniques, muzzles, sedation, etc.)		

Leadership Roles

	Skill	Case Log Number(s)	Vet or VTS Signature
82.	Establish and maintain a leadership position in the creation and maintenance of all appropriate facility records and logs in compliance with regulatory guidelines (e.g. radiology, surgery, anesthesia, laboratory, controlled substances		
83.	Establish and uphold a leadership role for staff in accurately recording medical information.		
84.	Establish and maintain a leadership position in inventory control		
85.	Establish and uphold a leadership role in maintaining appropriate sanitation and infection control protocols for a veterinary facility, including patient and laboratory areas.		
86.	Educate hospital staff in the recognition and proper handling and housing of patients with potentially infectious diseases		
87.	Adept at creating and delivering client education clearly and accurately that aligns with the client's understanding, including both oral and written forms such as educational handouts.		
88.	Outstanding interpersonal and public relations skills		
89.	Skilled application of crisis intervention/grief management skills with clients		

I, the undersigned, declare that I have read the entire AVTCP application packet.
AVTCP defines "mastery" as being able to perform the task safely, with a high degree of success, and without being coached.
I attest that the above-named applicant has achieved the AVTCP definition of mastery for the above skills that are marked with my signature. I further attest that I am not related to nor do I have any personal conflicts of interest with the applicant.

_____/_____ Printed Name and Degree
Signature

_____/_____ Printed Name and Degree
Signature

_____/_____ Printed Name and Degree
Signature

_____/_____ Printed Name and Degree
Signature

_____/_____Printed Name and Degree
Signature

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 Exotic Companion Animal Knowledge Lists

This list is both a guide for applicants to prepare for studying as well as to supply a list of acceptable species for case logs and reports. Any questions regarding species outside of this list, particularly for reptiles, amphibian, and fish which could encompass companion species not listed here, should be emailed to the ECA Member at Large Ashley McGaha (amcgaha@uga.edu) Please note that crocodilian and venomous species will not be accepted.

Species List

Please note that logs, reports, and skills must be from exotic companion animals compiled from this list, not wildlife or zoo cases. For example, if writing about a case involving a falconiform, it must belong to a falconer who keeps them for sport/companionship and not to be released.

- Pet Birds
  - Psittacines (eg: parrots, lories)
  - Passerines (eg: canaries, finches)
  - Columbiformes (eg: doves, pigeons)
  - Ramphastidae (eg: toucan, toucanettes)
  - Falconiformes (eg: falcons, hawks, kestrels)
  - Galliformes (eg: chicken, quail)
  - Anseriformes (eg: ducks, geese)
- Pet Mammals:
  - Lagomorph (eg: rabbits)
  - Rodentia (eg:guinea pigs, chinchillas, rats, mice, hamsters, gerbils, prairie dogs, degus)
  - Diprotodontia (eg: sugar gliders)
  - Eulipotyphla (eg: hedgehogs)
  - Carnivora (eg: ferrets, skunks)
  - Artiodactila (eg: miniature pigs)
- Pet Reptiles: No venomous or crocodilians permitted
  - Squamates (eg: lizards, monitors, snakes)
  - Testudines (eg: tortoises, turtles)
- Pet Amphibians
  - Anura (eg: frogs, toads)
  - Urodela (eg: salamanders, newts, axolotls, sirens)
- Pet Fish
  - Cypriniformes (eg: koi, goldfish)
  - Perciformes (eg: Oscars, cyclids, bettas)

Anatomy and Physiology

For each species on the "Species List", the following topics should be mastered. These parameters are meant for companion avian and exotic pets, which is very different from zoo exhibits, and the differences should be clearly understood.

- Physiologic values
  - Life span
  - Average body weight
  - Body temperature

    - Heart rate
    - Respiratory rate
    - Sexual maturity
    - Type of estrous cycle
    - Ovulation
    - Gestation period
    - Litter/clutch size
    - Incubation period
    - Normal weight at birth
    - Eyes and ears open
    - Weaning age
- Integument
    - Fur
    - Feathers
    - Glands
    - Skin and dermal layers
    - Scales
    - Chromatophores
    - Osteoderms
    - Femoral pores
- Senses
    - Visual
        - Pupillary light response
        - Visual spectrum
        - Eye shape
        - Eye lids
        - Lens
        - Avascular retinas
        - Tapetum
        - Spectacle
        - Nasolacrimal duct system
        - Parietal eye
    - Auditory
        - Acoustical ability
        - Pinna
        - Ear canal
        - Tympanic membrane
        - Operculum
        - Sound frequency ranges
    - Olfactory
    - Tactile
- Metabolism
    - POTZ—preferred optimal temperature zone
    - Ectothermic
    - Behavioral thermoregulation
    - Hibernation, brumation
    - Osmoregulation
- Gastrointestinal System
    - Herbivores
    - Carnivores
    - Omnivores
    - Granivore
    - Insectivore
    - Frugivore
    - Nectarivore
    - Florivores
    - GI transit time
    - Dental formulas for the variety of species
        - Incisors
        - Canine teeth

        - Deciduous teeth
        - Permanent teeth
        - Premolars
        - Molars
        - Diphyodont dentition
        - Peg teeth
    - Tongue
    - Salivary glands
    - Beak
        - Rhamphotheca
        - Rhinotheca
    - Oropharynx
    - Choanal slit
    - Palatal ostium
    - Diastema mastication
    - Esophagus
    - Crop
    - Stomach
    - Pylorus
        - Ability to vomit
    - Liver—number of lobes
    - Intestines
    - Gallbladder (which species have one)
    - Pancreas
    - Spleen
    - Splenopancreas
    - Adrenal glands
    - Hind gut fermenters
    - Cecum
    - Colon
    - Fusus coli
    - Cloaca
        - Coprodeum
        - Urodeum
        - Proctodeum
    - Vent
- Respiratory System
    - Nares
    - Cere
    - Obligate nasal breathers
    - Operculum
    - Infraorbital sinus
    - Larynx
    - Glottis
    - Trachea
        - Cartilaginous tracheal rings
    - Bronchi
    - Parabronchi
    - Syrinx
    - Lungs
        - Anatomy
        - Quantity
        - Function
    - Diaphragm
    - Air sacs
    - Vascularity
    - Gas exchange
    - Breathing cycles
- Cardiovascular System
    - Heart
    - Hepatic and renal portal systems

    - Cardiac shunting
    - Venous circulation
    - Arterial circulation
    - Lymphatic system
- Nervous System
    - Circadian Pacemaker
    - Brain
    - Spinal cord
    - Cranial nerves
    - Peripheral nerves
    - Autonomic nervous system
    - Parasympathetic nervous system
    - Vasovagal reflex
    - Melatonin
    - Pineal gland
- Musculoskeletal system
    - Pneumatic bones
    - Medullary bones
    - Skull
    - Vertebral Column
    - Vertebrae number
    - Occipital condyle
    - Synsacral
    - Coccygeal
    - Pygostyle
    - Tail autotomy and regeneration
    - Shell—modifications between species
    - Carapace
    - Plastron
    - Scutes
    - Musculature anatomy
    - Skeletal anatomy
    - Forms of locomotion
    - Digit anatomy
- Reproductive Systems
    - Sex chromosomes
    - Sex determination
    - Anogenital distance
    - Sexual dimorphism
        - Testes
        - Baculum
        - Hemipenes
        - Prostate
        - Penis vs. Phallus
        - Os penis
        - Colors
    - Female Reproductive System
        - Ovulation
        - Ovary
        - Oviduct
        - Fertilization
        - Egg formation
        - Oviparous
        - Viviparous
        - Egg anatomy
        - Incubation
        - Gestation
        - Postovulatory follicle
        - Uterus
        - Cervix
        - Ossification of pelvic symphysis

        - Mammary glands
    - Copulation techniques
    - Seasonal variances in habits
- Urinary System
    - Kidneys
    - Osmoregulation
    - Urates
    - Renal Portal System
    - Salt Gland
    - Uricotelic
    - Bladder
    - Urine consistency and color
    - Urates
- Endocrine System
    - Pituitary gland
    - Growth hormones
    - Thyroid
    - Parathyroid
    - Thymus
    - Adrenal glands
    - Corticosterone
    - Nasal salt glands
    - Pancreas
    - Insulin
    - Glucoregulation
    - Glucose
    - Glycogen
    - Somatostatin
- Circulatory System
    - Heart
    - Purkinje fibers
    - Aorta
    - Cerebral arterial Circle of Willis
    - Hepatic and renal portal systems
    - Arteriovenous networks
    - Blood
    - Extrinsic and intrinsic pathways
- Lymphatic and immune system
    - Thymus
    - Spleen
    - Specific immunity
    - Bursa of Fabricius
    - IgG
    - IgE
    - IgA
    - IgM

Anesthesia

Candidate must have a complete understanding of the theoretical and technical use, application, and relevance of these anesthetic issues for each individual species on the "species list".

- Anesthetic equipment
    - $ETCO_2$
    - Doppler
    - EKG
    - Indirect blood pressure
    - Direct blood pressure
    - Blood gas analysis

    - SPO_2
    - Ventilation options
    - Core body temperature measurement
    - Respiratory monitoring
    - IV/IO infusion options
- Proper thermal support
- Analgesics
- Pre-anesthetic agents
- Induction agents
    - Inhalants
    - Injectables
- Administration sites
- CRI options
- Normal physiologic reference ranges
    - Heart Rate
    - Respiratory Rate
    - Core body temperature
- Anesthetic techniques
    - Intubation
    - Induction
    - IV/IO/air sac catheter placement sites and sizes
- Intra-operative fluid therapy options
- Blood transfusions
    - Blood typing
    - Rates and administration methods
    - Recognize blood transfusion reactions
- Troubleshooting anesthetic reactions
- Emergency interventions and CPR (see Knowledge list)
- Post-anesthetic complications

Diseases and Conditions

Candidates are expected to recognize which of these diseases are species specific, and how certain diseases can and do manifest differently between varying species.
Candidates must have a complete knowledge of each of these diseases for every species on the "species list" including:

- **Causes**
- **Symptoms**
- **Modes of transmission**
- **Proper testing**
- **Treatment options**
- **Prognosis**

- Abscesses
- Antibiotic toxicities
- Adrenal disease
- Alleutian's disease
- Amyloidosis
- Anaphylaxis
- Anemia
- Atrial thrombosis
- Aural Abscess
- Autoimmune diseases
- Avian Bornavirus
- Barbering
- Behavioral Disorders

    - Feather Destructive
    - Skin mutilation
    - Screaming/Biting
- Biliary cysts/adenocarcinoma
- Blood parasites
- Cardiac Disease
- Cecal impaction
- Cheek pouch impaction
- Cherry eye
- Chlamydiosis
- Chordoma
- Clostridium piliforme (Tyzzer's disease)
- Crop diseases
    - Stasis
    - Infection (bacterial/fungal)
    - Impaction
    - Burn
- Cryptorchidism
- Cryptosporidiosis
- Cystitis
- Dental disease
    - Malocclusion
    - Abscess
    - Gingivitis
    - Gingival hyperplasia
- Dermatitis
- Dermatophytosis
- Dirofilariasis
- Distemper virus
- Diabetes Mellitus/Insipidus
- Dystocia
- Dysecdysis
- ECE (Epizootic catarrhal enteritis)
- Edema (Dropsy)
- Egg binding/dystocia
- Egg peritonitis
- Encephalitozoon cuniculi
- Endometrial hyperplasia
- Eosinophilic enteritis
- Estrogen toxicity
- Estrus associated aplastic anemia
- Fecal impactions
- Fibroma
- Foreign body
    - Crop
    - Proventricular/Ventricular
    - Gastro-Intestinal
    - Tracheal
- Fungal infections
    - Aspergillosis
    - Candida
    - Ornithogaster
- Fur slip

- Gastro-Intestinal obstruction or torsion
- Gastrointestinal stasis/Ileus
- Granulomatosis
- Helicobacter pylori
- Hemipene impaction/infection
- Hepatic lipidosis
- Herpes Virus
    - Pacheco's Disease
    - Papillomavirus/Papillomatosis
    - Marek's Disease
- Hydronephrosis
- Hypercalciuria
- Hypersplenism
- Hyper/hypothermia
- Hyper/hypocalcemia
- Hyper/hypovitaminosis
- Ileus
- Inclusion Body Disease (IBD)
- Inflammatory bowel disease
- Influenza
- Inhalant Toxins
    - Air fresheners
    - PTFE
    - Incense
    - Gas
- Insulinoma
- Intussusception
- Iron Storage Disease
- Lawsonia intracellularis infection
- Limb constriction- foreign object
- Liver disease
    - Infectious
    - Nutritional
    - Neoplastic
    - Hepatic Lipidosis
- Lymphoma
- Lymphadenitis
- Lymphocytic choriomeningitis virus
- Mammary neoplasia
- Mast cell tumor
- Megaesophagus
- Mucoid enteritis
- Mycobacterium
- Neoplasia varieties
- Nidovirus
- Nutritional secondary hyperparathyroidism (Metabolic Bone Disease)
- Obesity
- Ophthalmologic disease
- Osteoarthritis
- Osteomyelitis
- Otitis
- Ovarian cysts
- Paramyxovirus

- Parasitism
    - Skin
    - Gastro-Intestinal
    - Ears
    - Tracheal/air-sacs
    - Myiasis
- Parvovirus
- Pasteurellosis
- Penal hair ring
- Pheochromocytoma
- Pineconing scales
- Pneumonia
- Pododermatitis
- Polymyositis
- Polyoma Virus
- Porphyrinuria/pigmented urine
- Pre-ovulatory egg binding
- Pregnancy toxemia
- Proliferative colitis
- Prostate disease
- Proventricular Dilitation Disease (PDD)
- Prolapse
    - Cloaca
    - Vent
    - Intestinal
    - Hemipene/penis
    - Oviduct/uterus
    - Bladder
- Psittacine Beak and Feather Disease (PBFD)
- Pseudopregnancy
- Pulmonary mycoses
- Pyometra/metritis
- Rabies
- Renal disease
- Infectious
- Nutritional
- Neoplastic
- Gout
- Respiratory diseases of the small rodent
    - Murine Respiratory Mycoplasmosis (MRM)
    - Cilia-associated Respiratory (CAR) Bacillus
    - Streptococcus pneumoniae
    - Corynebacterium kutscheri (Pseudotuberculosis)
    - Pasteurella pneumotropica
    - Sendai Virus
    - Pneumonia Virus of Mice (PVM)
    - Rat Respiratory Virus (RRV)
    - Pneumonia carinii
- Rotavirus
- Rupture of the eye
- Scurvy
- Salmonellosis
- Self-mutilation

- Sepsis
- Sinusitis/air sacculitis/pneumonia
- Splay-Leg
- Spondylosis
- Stomatitis
- Testicular/ovarian neoplasia
- Thymoma
- Toxicosis
    - Lead
    - Zinc
    - Copper
    - Plant
- Tracheal mites
- Trauma
    - Dermal wounds/burns
    - Orthopedic
    - Soft tissue
    - Ocular
    - Crushing/shell wounds
    - Prey bites
- Treponema
- Trichobezoars
- Uric acid impaction
- Urolythiasis
- Uropygial gland disease
    - Impaction
    - Infection
    - Neoplasia
- Vaccine reaction
- Xanthomatosis

Emergency and Critical Care

Candidates must demonstrate a complete knowledge of all of these categories and parameters for each species on the "species list". They must be able to recognize and understand how each situation differs among species and how to troubleshoot between them.

- Triage the emergency patient
    - Common emergency presentations and causes
    - Follow proper steps once emergency has been determined
- Perform complete physical exam
    - Proper capture and restraint techniques
    - Physiologic normal reference ranges
    - Auscult heart and lungs
    - Hydration status
    - When to perform exam in steps to minimize stress-related deaths
- Recognize the need to receive supplemental oxygen and methods of administration
- Temperatures and humidity requirements
- Fluid therapy regimens
    - Shock fluid therapy rates
    - Maintenance fluid therapy rates
    - Correcting hydration deficits
- Types of fluids used and when to use them
- Catheter placement sites
    - Intravenous sites
    - Intraosseous sites

    - Urinary catheters
- Equipment for fluid therapy delivery
- Analgesics
    - NSAIDS
    - Opioids
    - Local/topical
- Injection routes
- Tube/syringe feeding
    - Equipment/supplies
    - Calculate metabolic caloric requirements
    - Common hand feeding formulas
- Venipuncture
    - Use of lab supplies and packaging supplies
    - Venipuncture sites
    - Blood volume limitations
- Radiology
    - Proper positioning
    - When to sedate
    - Use of positioning board
- Critical care wound management
    - Hemostasis
    - Bandaging techniques
    - Splinting
- Blood transfusion medicine
    - Blood typing
    - Rates and administration methods
    - Recognize blood transfusion reactions
- CPR
    - Common emergency drugs used and routes
    - Intubation techniques in the emergency patient
    - Prep and assist with air sac cannulation
- Equipment knowledge and set up
    - Doppler placement and indirect blood pressure measurement
    - ECG placement
    - Ambu-bag/ventilator
    - Oxygen tanks/cages/Incubators/nebulizers
    - Pulse Oximeters

Hematology

Candidates must have a complete understanding of each of these topics for each individual species on the "species list".

- Venipuncture
    - Correct site/restraint
    - How much total blood can be pulled safely
- Packed Cell Volume
    - Preparation and reading
    - Serum color/quality
- Slide Preparation
    - Correct method of making a smear
    - Staining technique
- Lab supplies
    - Microtainers
    - Special swabs
    - Knowledge of which tests require what sort of sample (ie: plasma vs. serum vs. whole blood)
- Machines and lab devices
    - Proper microscope use and maintenance
    - Centrifuges
    - Hemocytometers
    - Refractometers
    - In-house chemistry/hematology analyzers pros and cons
- Manual count
    - Hemocytometer
    - Solutions used

    - Equation
- Cell Identification
    - Erythrocytes
    - Leukocytes
        - Granulocytes/Heterophils
        - Agranulocytes
    - Thrombocytes/Platelets
- Regeneration
    - Reticulocytes-Calculate mean
    - Grading with Plus System/percentage mean
    - Poikilocytosis/Anisocytosis/Polychromasia
- Toxic/Reactive Changes
    - Identify changes to cells
    - Grading changes
- Hemoparasites
    - Identify
    - Knowledge of different species

Behavior

Candidates are expected to master all of these parameters for each species specified on the "Species list".

- Normal reproductive behaviors
    - Cycles
    - Oviparous, Viviparous, Ovoviviparous
    - Mating/courtship rituals
    - Sexual maturity
    - Gestation
    - Common physical displays
- Abnormal reproductive behavior
    - How to recognize dystocia
    - Irregular displays
- Age-related behaviors
    - Common chick behaviors (eg: begging, regurgitating, rolling, sleeping, learning/practicing to fly)
    - Differences between age-related blindness/lack of vision and acute blindness
    - Difference between normal age-related decrease in activity level vs. illness
- Signs of illness: Differentiate between normal behaviors and illness such as:
    - Vomiting vs. Regurgitating
    - Periods of inappetence
    - Brood patch feather removal/molting vs. feather destructive behavior
    - Mouth gaping vs. respiratory distress
    - Resting vs. lethargy
    - Egg laying vs. dystocia
    - Limping vs. playing/displaying
- Physical displays/body language for each species
    - Territorial displays
    - Affection displays
    - Aggressive/menacing displays
    - Feeding/nurturing displays
    - Mating/sexual
- Seasonal changes and associated behavior changes
    - Hibernation/brumation/estivation
    - Molting/Shedding
    - Appetite variance
    - Dietary requirements based on seasons
    - Reproductive habits
- Candidates should be prepared to advise pet owners of all species on a variety of topics and how to deal with these issues in their captive pets:
    - Biting
    - Excessive screaming
    - Boredom
    - Fighting with cage mates
    - Feather mutilation
    - Skin mutilation

- Enrichment options
- Foraging options
- Basic training techniques:
  - How to medicate
  - How to restrain
  - How to teach birds to step up on a hand
  - How to safely get pets into appropriate transport carriers

Husbandry

For each species of pet, the following topics should be mastered. These parameters are meant to be for companion avian and exotic pets, which is very different from zoo exhibits and the differences should be clear in these recommendations.

- Nutrition
  - Herbivore, omnivore, carnivore, insectivore, frugivore
  - Ideal diets as per native habitat
  - Proper commercially available diets
  - Dangerous/toxic foods
  - Supplements
  - Gut loading
  - Proper food presentation
  - Frequency and quantity of feeding
- Enclosures
  - Type (cage vs. aquarium vs. free roam)
  - Natural habitat (Arboreal vs. ground dwelling vs. swamp vs. forest vs. desert vs. rain forest vs. arid)
  - Substrate
  - Important furniture
  - Feeding devices
  - Enrichment devices
- Lighting/sleep cycles
  - Proper spectrum requirements
  - How to provide appropriately for pets in captivity
  - Diurnal vs. Nocturnal vs. Crepuscular
  - Indoor vs. outdoor options
- Temperature/Humidity
  - POTZ for all species
  - Proper gradients
  - How to provide appropriately for pets in captivity
  - What is normal for these species in their natural environments and how best to recreate that for pets in captivity
- Bathing
  - Frequency and techniques (spraying vs. misting vs. fogging vs. soaking, etc.)
  - Which species require alternative “bathing” options (dust or soil baths)
- Hibernation
  - Which species naturally hibernate
  - When, as a pet in captivity, is hibernation appropriate
  - How to safely create an environment for these species to hibernate
  - Brumation vs. hibernation
- Longevity
  - Average life expectancy for captive pet species
- Grooming Needs
  - Which species may need grooming (nails/claws, feathers, beaks, etc)
  - What techniques are commonly used
  - What are signs of illness vs. normal captive overgrowth (ie: overgrown beak of a turtle due to nutritional deficiency vs. improper cage furniture and substrate)

Surgical Procedures

Candidate must have a complete understanding of each of these procedures including which species may require specific procedures, how to prep for procedures, how to assist during the procedure, what instruments/tools/equipment will be required and how to properly use them, and possible pre and post surgical/procedural complications. Candidate must also be able to determine what each procedure is for and under what circumstances the procedure may or may not be indicated.

- Abscess management
- Abscess removal
- Adrenal tumor removal
- Amputation
    - Extremity
    - Penis
    - Hemipene
- Anastamosis
- Aural abscess removal
- Beak repair/reconstruction
- Biopsy
    - Dermal
    - Visceral
- Bite wound repair
- Caesarian
- Cloacalpexy
- Cryosurgery
- Cutaneous parasite removal
- Cystotomy
- Cystectomy
- Dental surgery
- Dental scaling
- Dental trimming
- Descenting
- Egg removal
- Endoscopy
    - Coelomic
    - Tracheal/Upper airway
    - Cloacal
    - Gastro-intestinal
    - Nasal
    - Intubation
- Enterotomy
- Enucleation
- Esophageal tube placement
- Exploratory abdominal
- Exploratory coeliotomy
- Gastrotomy
- Laser surgery
- Mammary tumor removal
- Orchiectomy
    - Scrotal
    - Pre-scrotal
    - Abdominal
- Orthopedic surgeries
    - Pinning
    - Plating
    - Splinting
    - Bandaging/external coaptation
    - Luxation reduction

    - Plastron/Carapace traumatic injuries
- Ovariohysterectomy
- Pancreatic tumor removal
- Prolapse repair
    - Hemipene
    - Penis
    - Oviduct
    - Colon
    - Cloaca
    - Bladder
- Radiosurgery
- Salpingectomy
- Salpingotomy
- Salpingohysterectomy
- Soft tissue mass removal
- Thymoma removal
- Tracheal intubation
- Urethrotomy

Book List ECA

Pharmacology

- Exotic Animal Formulary 5th edition, J. Carpenter, (Saunders)
- Plumb's Veterinary Drug Handbook 9th edition, Plumb, (Wiley-Blackwell)
- The Merck Veterinary Manual 11th edition, (Wiley)
- Clinical Pharmacology and Therapeutics for the Veterinary Technician by, 4th edition, R. Bill, (Elsevier)

Anesthesia

- Anesthesia and Analgesia for Veterinary Technicians, 5th edition, P. Lerche and J. Thomas, (Elsevier)
- Anesthesia of Exotic Pets by, 1st edition, Longley, (Saunders)
- Veterinary Anesthesia and Analgesia, 3rd edition, McKelvey and Hollingshead, (Mosby)
- Anesthesia for Veterinary Technicians, 1st edition, Bryant, (Wiley-Blackwell)

General Medicine

- McCurnin's Clinical Textbook for Veterinary Technicians, 9th edition, J. Bassert, Beal, Samples, McCurnin(Elsevier)
- Manual of Exotic Pet Practice, 1st edition, Mitchell and Tully Jr., (Saunders)
- Mader's Reptile and Amphibian Medicine and Surgery, 3rd edition, Divers and Stahl (Saunders)
- Current Therapy in Reptile Medicine and Surgery, 1st, D. Mader and S. Divers, (Elsevier)
- Ferrets, Rabbits, and Rodents: Clinical Medicine and Surgery, 4th edition, Quesenberry, Carpenter, Orcutt, Mans (Saunders)
- Rabbit and Rodent Dentistry Handbook, 1st edition, Capello, Gracis, Lennox (Zoological Education network)
- Textbook of Rabbit Medicine, 2nd edition, Varga and Harcourt-Brown, (Elsevier)
- Exotic Animal Medicine for the Veterinary Technician, 4th edition, Ballard and Cheek, (Wiley-Blackwell)

- Medicine and Surgery of Tortoises and Turtles, 1st edition, McArthur, Wilkinson, and Meyer, (Wiley-Blackwell)
- Handbook of Avian Medicine, 2nd edition, Tully Jr., Dorrestein, and Jones, (Elsevier)
- Avian Medicine, 3rd edition, J. Samour, (Saunders)
- Current Therapy in Avian Medicine and Surgery, B. Speer, (Elsevier)
- Avian Medicine: Principles and Application, Ritchie, Harrison, and Harrison, (HBD International Pub)
- Manual of Avian Practice 1st edition, Rupley, (Saunders)
- BSAVA Manual of Exotic Pets: a Foundation Manual, 5th edition, Meredith and Johnson Delaney, (BSAVA)
- BSAVA Manual of Rodents and Ferrets, 1st edition, Keeble and Meredith, (BSAVA)
- BSAVA Manual of Rabbit Medicine and Surgery, 2nd edition, Meredith and Flecknell, (BSAVA)
- BSAVA Manual of Psittacine Birds, 2nd edition, Harcourt-Brown and Chitty, (BSAVA)
- BSAVA Manual of Raptors, Pigeons and Passerine Birds, 1st edition, Chitty and Lierz, (BSAVA)
- BSAVA Manual of Reptiles, 3rd edition, Girling and Raiti, (BSAVA)
- Amphibian Medicine and Captive Husbandry, 1st edition, Whitaker and Wright, (Krieger Publishing Company)
- Birds of Prey: Health and Disease, 3rd edition, Cooper, (Wiley-Blackwell)
- Poultry Health and Management: Chickens, Turkeys, Ducks, Geese and Quail, 4th edition, Sainsbury, (Blackwell Science)
- Backyard Poultry Medicine and Surgery: A Guide for Veterinary Practitioners, 2nd edition, C. Greenacre and Morishita, (Wiley Blackwell)
- Principles and Practice of Veterinary Technology, 4th Edition, M. Sirois, (Mosby)
- Clinical Avian Medicine Volume 1 & 2, Harrison and Lightfoot, (Spix)
- The Veterinary Clinics of North America: Exotic Animal Practice Series, (Elsevier)

Emergency and Critical Care

- Small Animal Emergency and Critical Care for Veterinary Technicians, 4th edition, Battaglia, Steele, (Saunders)

Radiology

- Radiology of Birds: An Atlas of Normal Anatomy and Positioning, 1st edition, Silverman, Tell, Nugent-Deal, Palmer-Holtry, West, (Saunders)
- Radiology of Rodents, Rabbits and Ferrets: An Atlas of Normal Anatomy and Positioning, 1st edition, Silverman and Tell, (Saunders)

Anatomy and Physiology

- Clinical Anatomy and Physiology of Exotic Species: Structure and Function of mammals, birds, reptiles and amphibians, 1st edition, O'Malley, (Saunders)
- Sturkie's Avian Physiology, 6th edition, C. Scanes ,(Academic Press)
- Manual of Ornithology: Avian Structure and Function, 2nd edition, Proctor and Lynch, (Yale University Press)
- Ornithology, 4th edition, Gill and Prum, (W.H. Freeman)

Behavior

- Exotic Pet Behavior: Birds, Reptiles, and Small Mammals, 1st edition, Bradley Bays, Lightfoot, and Mayer, (Saunders)
- Manual of Parrot Behavior, Luescher, (Wiley-Blackwell)

Laboratory

- Veterinary Clinical Parasitology, 8th edition, Zajac and Conboy, (Wiley-Blackwell)
- Avian and Exotic Animal Hematology and Cytology, 3rd edition, Campbell and Ellis, (Wiley-Blackwell)
- Laboratory Medicine: Avian and Exotic Pets, 1st edition, Fudge, (Saunders)
- Laboratory Procedures for Veterinary Technicians, 6th edition, Sirois and Hendrix, (Mosby)
- Veterinary Parasitology Reference Manual, 5th edition, Foreyt (Wiley-Blackwell)
- Clinical Cases in Avian and Exotic Animal Hematology and Cytology, 2nd edition, T. Campbell and K. Grant, (Wiley- Blackwell)

Aquatic

- Handbook of Fish Diseases, Untergasser (TFH Publications)
- Fish Disease: Diagnosis and Treatment 2nd edition, Noga, (Wiley Blackwell)
- Fish Medicine, 2nd edition, Stoskopf, Phelps, Bauer (Art Sciences LLC)
- Fundamentals of Ornamental Fish Health, Roberts, (Wiley-Blackwell)

Knowledge list Avian/Exotic Pharmacology and Commonly Used Drugs

For each species on the "Species List", the following pharmacology topics should be mastered. Knowledge of potential drug side effects and safe handling practices should be mastered for each species on the "Species List". These parameters are meant to be for companion avian and exotic pets, in contrast to zoo exhibits and the differences should be clearly understood for these parameters.

- Drug Action
    - Pharmacokinetic factors of a drug
    - Absorption
    - Distribution
    - Excretion
    - Drug metabolism

- Routes of Administration
    - Oral
    - Parenteral administration
        - Subcutaneous
        - Intramuscular
        - Intravenous
        - Intradermal
        - Intraosseous
        - Intracoelomic
        - Intraperitoneal

- Neuropharmacology
    - Acetylcholine (Ach)
    - Norepinephrine (NE)
    - Agonists—causative agent
    - Antagonist—reversal, contrary action
    - Cholinomimetic Agents
        - Cholinesterase inhibitors
        - Anticholinesterases
        - Edrophonium chloride
        - Physostigmine
        - Pyridostigmine
        - Neostigmine
        - Organophosphates
            - Echothiophate iodide

    - Anticholinergics
    - Neuromuscular Blockers
    - Sympathomimetics
    - Sympatholytics

- Alpha-adrenergic blocking agents
- Beta-adrenergic blocking agents
- Tranquilizers
    - Phenothiazines
    - Benzodiazepines
- Sedatives
    - Alpha2 Adrenergic Agonists
- Hypnotic agents
- Anticonvulsants
    - Benzodiazepines
    - Barbiturates
    - N-Methyl-D-aspartate Antagonists (NMDA)

- Opioids
    - Mu & Kappa Agonist

- Kappa Antagonist
- Opioid Antagonist
- Analgesics
- Antipyretics
- Anti-inflammatory
- Corticosteroids
- Nonsteroidal Anti-Inflammatory Drugs (NSAID)
- Diuretic and Cardiovascular Drugs
    - Diuretics
    - Cardiac glycosides
    - Antiarrhythmia drugs
    - Calcium channel blockers
    - Angiotensin Converting Enzyme (ACE) Inhibitors

- Antiparasitic
    - Anthelmintics
    - Anti-protozoal
    - Benzimidazoles
    - Organophosphates
        - 2PAM (Pralidoxime)
    - Tetrahydropyrimidines
    - Imidazothiazoles
    - Milbemycins
    - Ivermectins
    - Anticestodal drugs
    - Chlorinated hydrocarbons
    - Organophosphates
    - Pyrethrins

- Antibiotic
    - Penicillins
    - Macrolides
    - Fluoroquinolones
    - Sulfonamides
    - Tetracyclines
    - Aminoglycosides

- Antifungal
    - Polenes
    - Imidazole, triazole, and thiazoles
    - Allylamines
    - Echinocandins

- Hormones and Synthetic Substitutes
- Gastrointestinal Drugs
- Antiemetics
- Emetics
- Antidiarrheal Agents
- Cathartic (laxatives)
- Ulcer Management Drugs
- Chelation drugs

Commonly Used Drugs

- Parasiticides
    - Carbaryl 5% Powder
    - Fenbendazole
    - Ivermectin
    - Levamisole
    - Metronidazole
    - Oxfendazole
    - Permethrin
    - Praziquantel
    - Sulfa-dimethoxine
    - Fipronil
    - Selamectin
    - Moxydectin
    - Imidoclopid

- Antimicrobial Drugs
    - Amikacin
    - Amoxicillin
    - Amoxicillin/Clavulanate
    - Ampicillin
    - Azithromycin
    - Carbenicillin
    - Cefazolin
    - Cephalexin
    - Cefoxitin
    - Cefotaxime
    - Ceftazidime
    - Chloramphenicol
    - Chlortetracycline
    - Ciprofloxacin
    - Clarithromycin
    - Clindamycin
    - Clotrimazole
    - Doxycycline
    - Enrofloxacin
    - Erythromycin
    - Fenbendazole
    - Fluconazole
    - Gentamicin (parenteral/ophthalmic)
    - Griseofulvin
    - Itraconazole
    - Ketaconazole

- Lincomycin
- Metronidazole
- Neomycin, polymyxin, bacitration ophthalmic
- Neomycin, polymyxin, bacitration, hydrocortisone ophthalmic
- Piperacillin
- Ponazuril
- Ofloxacin ophthalmic
- Oxytetracycline
- Penicillin G Procaine Benthathine
- Silver sulfadiazine
- Tetracycline
- Tetramycin ophthalmic
- Ticarcillin
- Trimethoprim-sulfadimethoxine
- Tylosin
- Vancomycin

- Analgesics/Anesthetics/Sedatives/Reversal Agents
  - Alfaxalone
  - Acepromazine
  - Atipamezole
  - Buprenorphine
  - Butorphanol
  - Carprofen
  - Diazepam
  - Dexmedetomidine
  - Fentanyl
  - Flunixin meglumine
  - Flurbiprofen ophthalmic
  - Gabapentin
  - Hydromorphone
  - Isoflurane
  - Ketamine
  - Ketoprofen
  - Meloxicam
  - Meperidine
  - Midazolam
  - Morphine
  - MS222
  - Naloxone
  - Propofol
  - Sevoflurane
  - Terbinafine
  - Tiletamine/Zolazepam
  - Tramadol
  - Xylazine
  - Yohimbine

- Emergency drugs
  - Atropine (parenteral/ophthalmic)
  - Calcium
  - Dexamethasone sodium phosphate
  - Diazepam
  - Midazolam
  - Dopamine
  - Doxapram
  - Epinephrine
  - Flumazenil

- Furosemide
- Glycopyrolate
- Lidocaine
- Sodium bicarbonate
- Vasopressin

- Common Miscellaneous Drugs
  - Acyclovir
  - Allopurinol
  - Aminophylline
  - Bismuth subsalicylate
  - Calcitonin
  - Calcium-EDTA
  - Calcium glubionate
  - Calcium gluconate
  - Cimetidine
  - Cisapride
  - Deslorelin acetate
  - Dexamethasone
  - Digoxin
  - Dorzolamide ophthalmic
  - Enalapril
  - Furosemide
  - Honey
  - Iron dextran
  - Lactobacilli
  - Loperamide HCL
  - Levamisole
  - Leuprolide acetate
  - Metoclopramide
  - Naloxone
  - Nystatin
  - Oxytocin
  - Pentobarbitol sodium
  - Phenobarbitol
  - Pimobendan
  - Praziquantel
  - Prednisone
  - Prednisolone
  - Probenecid
  - Terbutaline
  - Vitamins A, B1, B12, C, D, E, K1