

Surgical Skills List

A minimum of 80% (67 out of 84) of the skills must be mastered of all combined sections. Skills must be cross-referenced in your case logs.

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

Mastery requires having performed the task in a wide variety of patients and situations.

**Surgical cases must involve basic surgical techniques such as incision creation, dissection, and wound closure. Acceptable procedures include peripheral vessel cannulation with interventional techniques, organ removal or manipulation, radio-telemetry device implantation, and large reservoir subcutaneous pump implantation. Examples of procedures not complex enough to qualify for case logs include routine laceration closure, toe or tail clipping or implantation of subcutaneous ID chips. Procedures where the applicant acted as a secondary surgeon or sterile assistant may be accepted if the duties were relatively extensive and a detailed description of the duties performed by the applicant is included in the case logs and reports. A minimum of one survival surgery must be represented in the case logs and case reports. The review committee will evaluate these cases on a case-by-case basis.*

Requirements

	Skill	Case Log Number(s)	DVM or VTS Signature
1.	Advanced anatomical knowledge and ability to describe of all species performing surgery on.		
2.	Advanced knowledge of mammalian cardiopulmonary physiology.		
3.	Advanced knowledge of non-ruminant gastrointestinal physiology		
4.	Advanced knowledge of ruminant gastrointestinal physiology		
5.	Principles of aseptic surgery. Demonstrate maintenance of asepsis in the OR with appropriate use of surface disinfectants and contact times		
6.	Aseptic gowning and gloving		
7.	Perform a surgical hand scrub using a water-based scrub (e.g., 2% chlorhexidine scrub) or an alcohol-based scrub (e.g., Avagard, Sterillium)		
8.	Biology of wound healing from incision to scar and complete remodeling		
9.	Procedural adaptability with complications		

General Surgical Skills

	Skill	Case Log Number(s)	DVM or VTS Signature
10.	Proper instrument identification/handling		
11.	Demonstrate knowledge and ability to place purse string and/or finger trap suture		
12.	Mastery of venous cut-down procedure		
13.	Mastery of jugular or femoral vein sheathe or catheter placement		
14.	Mastery of carotid or femoral artery sheathe or catheter placement.		
15.	Mastery of various methods of centesis (cysto, percutaneous, and abdominal)		
16.	Mastery of simple interrupted suture pattern		
17.	Mastery of simple continuous suture pattern		
18.	Mastery of cruciate suture pattern		
19.	Mastery of forward interlocking suture pattern		
20.	Mastery of vertical mattress suture pattern		
21.	Mastery of horizontal mattress suture pattern		
22.	Proper tie off technique of surgically created pedicles		
23.	Use of rib spreader		

24.	Treatment of various wounds		
25.	Use of laparotomy retractors		
26.	Ability to read, interpret and understand surgical research protocols		
27.	Mastery of anastomosis technique		
28.	Maintain, set-up, troubleshoot, and understand indications for electrocautery units		
29.	Mastery of debridement technique		
30.	Various organ biopsy techniques		
31.	Knowledge of various suture types and absorption rates. (Plain gut, Light/Medium/Heavy Chromic, Dexon, Monocryl, Vicryl, Vicryl Rapide, PDS)		
32.	Knowledge of different needle types and when to use them. (Taper vs. Cutting)		
33.	Differences and use of monofilament and braided sutures		
34.	Ability to perform a minimum of two endoscopic procedures with an endoscope		
35.	Ability to perform a minimum of two laparoscopic procedures		
36.	Ability to place trocars or ports		
37.	Proper irrigation and suction technique		
38.	Proper insufflation technique		
39.	Mastery of open and closed gloving technique		
40.	Ability to create hemostasis on a lacerated organ, vessel or other soft tissue		
41.	Proper setup and use of battery or gas powered hand drill or saw		
42.	Repair of long bone using plates		
43.	Repair of long bone using pins/external fixators		
44.	Closing of thoracotomy		
45.	Closing of sternotomy		
46.	Skin graft harvesting and placement		
47.	Mastery of soft tissue close for normal, loose and high tension areas		
48.	Set-up, use, maintain, troubleshoot and understand indications for different stapling or vessel sealing equipment (e.g., Gyrus electrosurgical unit, Force Triad, Ligasure, Surgiclip)		
49.	Identify appropriate anatomic landmarks for various types of soft tissue surgical procedures (including surgery of the fascia, skin, fibrous tissues, fat, muscles, nerves or blood vessels)		
50.	Identify appropriate anatomic landmarks for various upper respiratory or head and neck surgical procedures (i.e., guttural pouch, tie-forward procedure)		
51.	Identify appropriate anatomic landmarks for various perineal or urogenital surgical procedures (e.g., perineal hernia or urethrostomy)		

Analgesia

	SKILL	Case Log Number(s)	DVM or VTS Signature
52.	Appropriate recommendation for pre, intra and post operative opioids		
53.	Appropriate recommendation for pre, intra and post operative NSAIDS		
54.	Ability to perform incisional or line blocks		
55.	Placement of soaker catheters		
56.	Placement of post operative surgical drains		

Surgical Nursing

	Skill	Case Log Number(s)	DVM or VTS Signature
57.	Appropriate antibiotic use for various infections or preemptive use.		
58.	Assign appropriate ASA status after reviewing patient history, PE, and diagnostic results in collaboration with a veterinarian		
58.	Perform a comprehensive physical exam		
59.	Demonstrate thorough knowledge of metric conversions		
60.	Mastery of instrument and equipment disinfection techniques		
61.	Mastery of stereotaxic positioning		
62.	Treatment of various wounds		
63.	Intubation of two species. 1 st _____ 2 nd _____		
64.	Sterile draping of patient		
65.	Demonstrate advanced knowledge and proper use of equipment used to move, protect, pad, and position large animal surgical patients		
66.	Possess anticipatory skills and demonstrate appropriate tissue and/or instrument handling techniques while assisting the surgeon during a large animal abdominal procedure		
67.	Demonstrate advanced knowledge of anatomy and physiology as it relates to various upper respiratory or head and neck (i.e., oral/aural) surgical procedures and identify potential complications and postoperative considerations for each (e.g., laryngeal hemiplegia, tie-forward, sinus flap, guttural pouch surgical considerations; stages of laryngeal collapse)		
68.	Demonstrate advanced knowledge of anatomy and physiology as it relates to various soft tissue surgical procedures (including surgery of the fascia, skin, fibrous tissues, fat, muscles, nerves or blood vessels) and identify potential complications and postoperative considerations for each		
69.	Demonstrate advanced knowledge of anatomy and physiology as it relates to various orthopedic surgical procedures and identify potential complications and postoperative considerations for each (e.g., fractures and repair options such as external fixation or combination repair techniques and coaptation options such as casting; arthrodesis, implant failure and infection concerns, post-op external coaptation management considerations)		
70.	The ability/ knowledge to set-up, maintain, and troubleshoot various equipment used for laparoscopic or arthroscopic surgery		
71.	Demonstrate proper OR technique in the event of contamination (e.g., use of sleeves, re-gloving or re-gowning techniques)		
72.	Maintain, set-up, troubleshoot, and understand indications for portable		

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	or central suction units		
73.	Demonstrate knowledge of shelf life of sterile goods when using low temperature sterilization methods (e.g., ethylene oxide, hydrogen peroxide gas plasma)		
74.	Demonstrate knowledge of shelf life of sterile goods when using steam sterilization methods		
75.	Proper use of bead sterilization		
76.	Mastery of stomach tube placement in ruminant and/or non ruminant species		
77.	Evaluate a variety of bandages and demonstrate knowledge of potential complications associated with extended wear		
78.	Mastery of venipuncture in healthy, sick, and/or debilitated animals.		

Leadership Roles

	Skill	Case Log Number(s)	DVM or VTS Signature
79.	In association with other medical team members, administer CPR (following VECCS RECOVER guidelines), evaluate effectiveness, and troubleshoot therapy		
80.	Ability to lead a necropsy with macro descriptions of anatomy and findings		
81.	Ability to delegate patient setup and instrumentation		
82.	Ability to conduct a major surgical procedure, while managing OR staff		
83.	Ability to review surgical protocol and suggest improvements		
84.	Attention to animal welfare during the pre, intra and post operative periods with special attention to pain management husbandry standards and humane end points.		

I, the undersigned, declare that I have read the entire ALAVTN application packet. I further attest that the above-named applicant has achieved the ALAVTN definition of mastery for the above skills that are marked with my 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
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. Only DVM's or credentialed veterinary technicians with a VTS may sign.