

Surgical Skills List

A minimum of 80% of the skills must be mastered of all combined sections (34 of 43 skills) with the exception of the General Surgical skills section, where 80% of the skills in this section must be mastered (33 of 41 skills).

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% chlorhexadine 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
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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
53.	Appropriate antibiotic use for various infections or preemptive use.		
54.	Assign appropriate ASA status after reviewing patient history, PE, and diagnostic results in collaboration with a veterinarian		
55.	Perform a comprehensive physical exam		
56.	Demonstrate thorough knowledge of metric conversions		
57.	Mastery of instrument and equipment disinfection techniques		
58.	Mastery of stereotaxic positioning		
59.	Treatment of various wounds		
60.	Intubation of two species. 1 st _____ 2 nd _____		
61.	Sterile draping of patient		
62.	Demonstrate advanced knowledge and proper use of equipment used to move, protect, pad, and position large animal surgical patients		
63.	Possess anticipatory skills and demonstrate appropriate tissue and/or instrument handling techniques while assisting the surgeon during a large animal abdominal procedure		
64.	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)		
65.	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		
66.	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)		
67.	The ability/ knowledge to set-up, maintain, and troubleshoot various equipment used for laparoscopic or arthroscopic surgery		
68.	Demonstrate proper OR technique in the event of contamination (e.g., use of sleeves, re-gloving or re-gowning techniques)		
69.	Maintain, set-up, troubleshoot, and understand indications for portable or central suction units		
70.	Demonstrate knowledge of shelf life of sterile goods when using low temperature sterilization methods (e.g., ethylene oxide, hydrogen		

