

American College of Veterinary Surgeons

Phase I Surgical Knowledge Examination, April 8, 2024

2024 PHASE I EXAMINATION READING LIST

The following references and books are suggested reading in preparation for the 2024 Phase I examination. Other textbooks and current references may be pertinent. Page numbers refer to print textbooks. Digital versions may have different page numbers.

SELECTED REFERENCES FOR SMALL ANIMAL SURGERY

- 1) Johnston, S., and K. Tobias. *Veterinary Surgery: Small Animal*. 2nd ed. Elsevier, 2018.*
- 2) Hall, J. E., and M. E. Hall. *Guyton and Hall Textbook of Medical Physiology*. 14th ed. Elsevier, 2020. *Chapters 4-16, 20, 22, 25, 30-31, 37-43, 50, 61, 63-65, 71*
- 3) Grimm, K., L. Lamont, W. Tranquilli, S. Greene, and S. Robertson, eds. *Veterinary Anesthesia and Analgesia, The 5th of Lumb and Jones*. 5th ed. Wiley-Blackwell, 2015. *Chapters 1-36, 44-45, 53-57.*
- 4) Boothe, D. M. *Small Animal Clinical Pharmacology and Therapeutics*. 2nd ed. Elsevier, 2011. *Chapter 6 (Principles of Antimicrobial Therapy), Chapter 7 (Antimicrobial Drugs), Chapter 19 (GI Physiology), and Chapter 29 (Anti-Inflammatory Drugs).*
- 5) Johnson, A. L., J. E.F. Houlton, and R. Vannini. *AO Principles of Fracture Management in the Dog and Cat*. AO Publishing, 2005. *Chapters 1, 2, 3, 20, 27.*

Knowledge of basic and applied anatomy is assumed and should be reviewed in an appropriate text. For example, Hermanson, J.W., and A. de LaHunta. *Miller's Anatomy of the Dog*. 5th ed. Elsevier, 2019.

*Phase I portions of Johnston and Tobias. Please note that if no page numbers are given, the entire chapter is included.

<i>Veterinary Surgery: Small Animal, 2nd Edition, Johnston and Tobias, 2018</i>		
Chapter	Title	Pages (full chapter unless specific pages are noted)
<i>Surgical Biology</i>		
Chapter 1	Inflammatory Response	
Chapter 2	Molecular and Cellular Biology: Genomics	
Chapter 3	Stem Cells and Regenerative Therapy	
Chapter 4	Platelet Rich Plasma and Autologous Conditioned Sera	
Chapter 5	Fluid Therapy	
Chapter 6	Shock	
Chapter 7	Bleeding and Hemostasis	

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Chapter	Title	Pages (full chapter unless specific pages are noted)
Chapter 8	Metabolism and Nutritional Needs of Surgical Patients	
Chapter 9	Wound Healing	
Chapter 10	Wound Infections and Antimicrobial Use	
<i>Surgical Methods and Perioperative Care</i>		
Chapter 11	Sterilization	
Chapter 12	Instrumentation	
Chapter 13	The Operating Room	
Chapter 14	Monitoring for Surgical Infection	
Chapter 15	Principles and Use of Energy Sources in Small Animal Surgery: Electrosurgery and Laser Applications	
Chapter 16	Suture Material, Tissue Staplers, Ligation Devices, and Closure Methods	
Chapter 17	Instrument and Tissue Handling Techniques	
Chapter 18	Surgical Hemostasis	
Chapter 19	Bandages and Drains	
Chapter 20	Biopsy General Principles	
Chapter 21	Anesthesia Principles and Monitoring	
Chapter 22	Anesthetic Practice for Existing Conditions	
Chapter 23	Fundamentals of Interventional Radiology and Interventional Endoscopy	
Chapter 24	Fundamentals of Laparoscopy and Thoracoscopy	
Chapter 25	Introduction to Oncologic Surgery for the General Surgeon	

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Chapter	Title	Pages (full chapter unless specific pages are noted)
<i>Neurosurgery</i>		
Chapter 26	Neurologic Examination and Neuroanatomic Diagnosis	
Chapter 28	Imaging of the Neurologic System	
Chapter 29	Pathogenesis and Physiology of Central Nervous System Disease and Injury	
<i>Musculoskeletal System</i>		
Chapter 38	Tissues of the Musculoskeletal System	
Chapter 39	Bone Biomechanics and Fracture Biology	
Chapter 40	Open Fractures	
Chapter 41	Internal Fracture Fixation	
Chapter 42	External Skeletal Fixation	
Chapter 43	Overview of Minimally Invasive Osteosynthesis Principles	
Chapter 44	Bandaging, External Coaptation, and External Devices for Companion Animals	
Chapter 45	Delayed Unions, Non-unions, and Malunions	
Chapter 47	Osteomyelitis and Implant-Associated Infections	
Chapter 48	Bone Grafts and Substitutes	
Chapter 68	Arthritis	

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Chapter	Title	Pages (full chapter unless specific pages are noted)
Chapter 70	Muscle and Tendon Disorders	1316-1317 (stop at general principles on treatment) 1319-1321 (stop at specific tendon problems)
Chapter 71	Arthroscopy	1323-1331 (stop at basic techniques of small animal arthroscopy)
Chapter 73	Osteochondrosis	1372-1380 (stop at principles of osteochondrosis diagnosis)
Chapter 74	Gait Analysis	
<i>Skin and Reconstruction</i>		
Chapter 75	Primary Wound Closure	
Chapter 76	Open Wounds	
Chapter 81	Burns	1495-1500 (stop at burn treatment)
<i>Abdomen</i>		
Chapter 83	Spleen	1551-1557 (stop at surgical techniques)
Chapter 84	Abdominal Wall Reconstruction and Hernias	1564-1567 (stop at principles of abdominal hernia repair)
Chapter 85	Diaphragmatic Hernias	1592-1593 (stop at surgical approaches)
Chapter 86	Peritoneum and Retroperitoneum	1603-1615 (stop at pathophysiology)

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Chapter	Title	Pages (full chapter unless specific pages are noted)
<i>Digestive System</i>		
Chapter 87	Soft Tissues of the Oral Cavity	1637-1641 (stop at general considerations)
Chapter 88	Salivary Glands	1653-1655 (stop at nonsurgical salivary gland disease)
Chapter 89	Mandibulectomy and Maxillectomy page	1663-1664 (stop at canine oral tumors)
Chapter 90	Esophagus	1677-1681 (stop at surgical approaches to the esophagus)
Chapter 91	Stomach	1700-1704 (stop at general surgical principles)
Chapter 92	Small Intestine	1730-1740 (stop at surgical procedures)
Chapter 93	Colon	1761-1768 (stop at techniques for colonic wound closure)
Chapter 94	Rectum, Anus, and Perineum	1783-1787 (stop at surgical approaches)
Chapter 95	Liver and Biliary System	1828-1834 (stop at hepatobiliary imaging)
Chapter 96	Hepatic Vascular Anomalies	1852-1858 (stop at diagnostic evaluation)
Chapter 97	Pancreas	1886-1891 (stop at specific surgical procedures)
Chapter 98	Feeding tubes	1915-1917 (start at tube feeding specifics)

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Chapter	Title	Pages (full chapter unless specific pages are noted)
<i>Respiratory System</i>		
Chapter 99	Nasal Planum, Nasal Cavity, and Sinuses	1919-1920 (stop at diagnostic approach) + Figure 99.6 on page 1928
Chapter 100	Palate	1935-1938 (stop at palate defects)
Chapter 101	Larynx	1946-1949 (stop at laryngeal neoplasia)
Chapter 102	Trachea and Bronchi	1963-1965 (stop at techniques: general)
Chapter 103	Lungs	1983-1987 (stop at postoperative monitoring)
<i>Thorax</i>		
Chapter 104	Thoracic Wall	2001-2006 (stop at surgical approaches to the thorax)
Chapter 105	Thoracic Cavity	2019-2027 (stop at diagnostic imaging)
<i>Cardiovascular System</i>		
Chapter 106	Cardiac Surgery	2049-2055 (stop at strategies for cardiac surgery)
Chapter 107	Pericardial Surgery	2084-2085 (stop at congenital pericardial diseases)
Chapter 108	Vascular Surgery	2093-2103 (stop at endovascular surgery)

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Chapter	Title	Pages (full chapter unless specific pages are noted)
<i>Urogenital System</i>		
Chapter 109	Ovaries and Uterus	2109-2114 (stop at surgery and outcome)
Chapter 110	Vagina, Vestibule, and Vulva	2130-2132 (stop at surgical approaches)
Chapter 111	Testes, Epididymides, and Scrotum	2142-2145 (stop at disorders)
Chapter 112	Penis and Prepuce	2158-2161 (stop at specific disorders)
Chapter 113	Prostate	2168-2171 (stop at diagnostic approach to prostatic disease in the dog)
Chapter 114	Kidneys	2184-2188 (stop at preoperative management)
Chapter 115	Ureters	2202-2204 (stop at ureteral obstruction)
Chapter 116	Bladder	2219-2222 (stop at diagnostic techniques)
Chapter	Title	Pages (full chapter unless specific pages are noted)
Chapter 117	Urethra	2234-2239 (stop at surgical procedures)
Chapter 118	Sphincter mechanism Incontinence	2256 (stop at diagnostic assessment)

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Chapter	Title	Pages (full chapter unless specific pages are noted)
<i>Endocrine System</i>		
Chapter 120	Adrenal Glands	2281-2283 (stop at diagnosis of functional adrenal tumors)
Chapter 121	Thyroid and Parathyroid Glands	2291-2293 (stop at feline hyperthyroidism)
<i>Ear</i>		
Chapter 122	Pinna and External Ear Canal	2309-2311 (stop at conditions affecting the pinna)
Chapter 123	Middle and Inner Ear	2328-2331 (stop at inflammatory disease of the middle ear)
Chapter 124	Eye	2343-2344: Eyelids Anatomy and physiology (stop at special surgical considerations) 2358: Conjunctiva (stop at diseases of the conjunctiva) 2360: Nictitating membrane (stop at everted nictitating membrane) 2363-2364: Cornea (stop at indolent ulcers) 2365: Orbit (stop at clinical signs of orbital disease)

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SELECTED REFERENCES FOR LARGE ANIMAL SURGERY

- 1) Auer, J., and J. Stick. *Equine Surgery*. 5th ed. Elsevier, 2018. *Chapters 1-25, 42, 50, 68-73, 75-80, 105* in their entirety; in addition, information relevant to anatomy, physiology, and fundamental pathophysiology in *Chapters 26-41, 43-67, 74, 81-104*. This information is generally (but not always) found within the first few pages of the chapter; it may be scattered throughout.
- 2) Nixon, A. J., ed. *Equine Fracture Repair*. 2nd ed. Wiley-Blackwell, 2020. *Chapters 1-13, 43-49*.
- 3) Klein, B. *Cunningham's Textbook of Veterinary Physiology*. 6th ed. Elsevier, 2019.
- 4) Muir, W. W., and J. A.E. Hubbell, eds. *Equine Anesthesia: Monitoring and Emergency Therapy*. Elsevier, 2009.
- 5) Fubini, S. L., and N. G. Ducharme. *Farm Animal Surgery*. 2nd ed. W B Saunders Co., 2017. *Chapters 1-8* in their entirety; in addition, information relevant to anatomy, physiology, and fundamental pathophysiology in *Chapters 12-24*—this information is generally found within the first few pages of the chapter.
- 6) McIlwraith, C. W., I. Wright, and A. Nixon. *Diagnostic and Surgical Arthroscopy in the Horse*. 4th ed. Elsevier, 2014. *Chapters 1-3*.
- 7) Boothe, D. M. *Small Animal Clinical Pharmacology and Therapeutics*. 2nd ed. Elsevier, 2011. *Chapters 6, 7, 29*.
- 8) Ragle, C. A., ed. *Advances in Equine Laparoscopy*. 1st ed. Wiley-Blackwell, 2012. *Chapters 1-6*.
- 9) Theoret, C., and J. Schumacher, eds. *Equine Wound Management*. 3rd ed. Wiley, 2017. *Chapters 1-5*.

Knowledge of basic and applied anatomy is assumed and should be reviewed in an appropriate text. For example: Singh, B. *Dyce, Sack, and Wensing's Textbook of Veterinary Anatomy*. 5th ed. Elsevier, 2017.