

AMERICAN COLLEGE OF VETERINARY SURGEONS
PHASE II SURGICAL COMPETENCY EXAMINATION
INFORMATION PAMPHLET

EXAMINATION DATE: FEBRUARY 14–15, 2022



CONTENTS

Requirements for Board Certification.....	1
Policies for candidates whose credentials were first approved in 2017 or later.....	1
Eligibility for the Phase II Examination.....	1
Retaking the Examination.....	1
Candidates who did not pass the third attempt.....	1
Limitations.....	1
Policies for candidates whose credentials were first approved in 2016 or earlier.....	2
Eligibility for the Phase II Examination.....	2
Retaking the Examination.....	2
Candidates who did not pass the third attempt.....	2
Limitations.....	2
Policies for Dual Certification candidates.....	2
Retaking the Examination.....	3
Candidates who did not pass the third attempt.....	3
Limitations.....	3
Taking the Phase II Examination.....	3
Certification for Successful Candidates.....	3
Examination Schedule.....	4
Examination Description.....	4
Case-based Section.....	5
Practical Section.....	5
Examination Rules.....	5
Registering for the Examination.....	5
Submit the Online Registration Application.....	6
Pay the Examination Fee.....	6
Confirmation.....	6
Requesting an Accommodation.....	7
Accommodation Requests for Disabilities.....	7
Accommodation Requests for Health-Related Needs.....	8
Scheduling the Examination at a Test Center.....	8
Cancellation and Refund.....	8
Cancellation due to denial of credentials by ACVS.....	8
Cancellation due to unforeseen circumstances for approved candidates.....	8

No-Show Fees	8
Refund Requests	9
At the Test Center	9
Test Center Availability/Contingency Planning.....	9
2022 ACVS Phase II Examination Reading List	10
Selected References for Small Animal Surgery	10
Selected References for Large Animal Surgery	10
Journals for Small Animal Surgery Candidates	11
Journals for Large Animal Surgery Candidates	11
Practical Section Blueprint.....	12
Small Animal Practical Section Blueprint	12
Large Animal Practical Section Blueprint	12
Examination Instructions	13
Case-based Section Instructions	13
Practical Section Instructions.....	13
Explanation of Common Questions on the Practical or Case-based Sections	14
Laboratory Data	14
Diagnostic Imaging Studies	15
Sample Questions	15
Determination of Passing Score.....	15
Grading Process	15
Reporting of Results.....	16
Advisor Assignments.....	16
Requests for Rescoring	16
Appeal Procedure	16
Examination Security	16
Procedures in the Event of Unethical Behavior	16
Procedure or Imposition of Sanctions on Candidates Accused of Unethical Behavior	18

Note: This pamphlet reflects the policies and procedures as of June 2021. All policies and procedures are subject to change. If you have any questions or require further information, please visit www.acvs.org or contact the ACVS staff at (301)-916-0200 x123

REQUIREMENTS FOR BOARD CERTIFICATION

In order to achieve board certification, individuals must obtain each of the credentials outlined below.

- I. Successful completion and approval of all Resident Training Requirements.
- II. Successful submission and acceptance of a scientific manuscript in an approved journal.
- III. Submission and acceptance of a Credentials Application.
- IV. Successful passing of all components of the Examination.

The ACVS Examination consists of two parts: Phase I Surgical Knowledge and Phase II Surgical Competency.

POLICIES FOR CANDIDATES WHOSE CREDENTIALS WERE FIRST APPROVED IN 2017 OR LATER

ELIGIBILITY FOR THE PHASE II EXAMINATION

To be eligible to sit for the Phase II examination, candidates must have successfully completed all resident training requirements, passed the Phase I examination, and have had their credentials application approved by the ACVS Board of Regents. Beginning with the 2022 examination, prospective examinees may register with ACVS for the examination prior to acceptance of their credentials by ACVS so that they can reserve a seat at a test center. However, sitting the examination is contingent upon acceptance of credentials. Should an individual's credentials application not be accepted by ACVS, the test appointment must be canceled.

RETAKE THE EXAMINATION

Candidates who fail one or both sections of the examination the first or second time and plan to retake those sections must register with ACVS by the established registration deadline (approximately July 26) in the year immediately preceding the desired examination. Only the sections not yet passed must be taken on the second or third attempt. Candidates should be sure that the ACVS office has their current contact information, including email. Failed candidates will be assigned advisors who are current members of the Examination Committee. The advisors will be available to counsel candidates on their previous examination performance, including recommendations for future preparation.

CANDIDATES WHO DID NOT PASS THE THIRD ATTEMPT

To be eligible to continue in the process, candidates must submit a [recredentialing application](#) that is approved by the ACVS Board of Regents.

Failure to successfully complete all required sections of the examination within three (3) attempts will require submission of a [recredentialing application](#) to the Resident Credentialing Committee. Upon approval of the application by the ACVS Board of Regents, complete Phase II re-examination is required, including any section that was previously passed. Candidates have three additional attempts to pass both sections of the Phase II examination. Candidates should contact the ACVS office regarding current credentials application requirements.

LIMITATIONS

Candidates are allowed a maximum of six total attempts within nine years from acceptance of their Credentials Application to pass the Phase II examination. Any candidate who has not passed the examination after six attempts will be required to restart the process to achieve ACVS board certification and meet all requirements (new residency, Phase I examination, and acceptance of credentials, etc.) before being allowed any future attempts.

POLICIES FOR CANDIDATES WHOSE CREDENTIALS WERE FIRST APPROVED IN 2016 OR EARLIER

ELIGIBILITY FOR THE PHASE II EXAMINATION

Candidates transitioning from the traditional Certification Examination are required to take the Phase II examination if they did not pass the Case-based and/or Practical examination as of February 2018 or in subsequent years.

Candidates required to take both the Phase I and Phase II examinations should register for both examinations in the same calendar year. Candidates must pass both Phase I and Phase II within three calendar years, although those years do not need to be consecutive (for example, 2019, 2021, 2022). Candidates who choose not to register for both Phase I and Phase II in the same calendar year may forfeit an attempt at the examination for which they did not register. If you take either or both examinations within a single calendar year, that counts as one attempt. Candidates are given three attempts to pass both examinations. Recredentialing will be required if the candidate has not successfully completed all required examinations (Phase I and/or Phase II) as applicable within 3 attempts per examination.

RETAKE THE EXAMINATION

Candidates who fail one or both sections of the examination the first or second time and plan to retake those sections must register with ACVS by the established registration deadline (approximately July 26) in the year immediately preceding the desired examination. Candidates should be sure that the ACVS office has their current contact information, including email. Failed candidates will be assigned advisors who are current members of the Examination Committee. The advisors will be available to counsel candidates on their previous examination performance, including recommendations for future preparation.

CANDIDATES WHO DID NOT PASS THE THIRD ATTEMPT

Failure to successfully complete all required sections of the examination within three (3) attempts per examination will require submission of a [recredentialing application](#) to the Resident Credentialing Committee. Upon approval of the application by the ACVS Board of Regents, complete re-examination is required. The Phase I examination is required if the written or Phase I examination has never been passed. Both sections of the Phase II examination are required following recredentialing. Candidates should contact the ACVS office regarding current credentials application requirements.

LIMITATIONS

Candidates who began in the traditional certification examination process are given two options, whichever allows the greater number of Phase II examination attempts: 1) a maximum of six examination attempts within nine years from acceptance of their credentials application, or 2) candidates who have taken the examination six times or more by 2020 may take the examination two more times before 2023 (i.e., the last examination is in 2022), subject to successful recredentialing. Any candidate who has not passed the Phase II examination after six attempts, or, if applicable, by 2023, will be required to restart the process to achieve ACVS board certification and meet all requirements (new residency, Phase I examination, and acceptance of credentials, etc.) before being allowed any future attempts.

POLICIES FOR DUAL CERTIFICATION CANDIDATES

Diplomates who desire to change their species of emphasis (i.e., are seeking Dual Certification) must have had their Dual Certification application or recredentialing application approved by the ACVS Board of Regents. Dual certification candidates must pass Phase II within three attempts. Recredentialing is required after three attempts.

RETAKE THE EXAMINATION

Dual certification candidates who fail one or both sections of the examination the first or second time and plan to retake those sections must register with ACVS by the established registration deadline (approximately July 26) in the year immediately preceding the desired examination. Candidates should be sure that the ACVS office has their current contact information, including email. Failed candidates will be assigned advisors who are current members of the Examination Committee. The advisors will be available to counsel candidates on their previous examination performance, including recommendations for future preparation.

CANDIDATES WHO DID NOT PASS THE THIRD ATTEMPT

Failure to successfully complete all required sections of the examination within three (3) attempts per examination will require submission of a [recredentialing application](#) to the Resident Credentialing Committee. Upon approval of the application by the ACVS Board of Regents, complete Phase II re-examination is required, including any section that was previously passed. Candidates have three additional attempts to pass both sections of the Phase II examination.

LIMITATIONS

Dual Certification candidates are allowed a maximum of six total attempts within nine years from acceptance of their Application for Dual Certification to pass the Phase II examination. Any candidate who has not passed the examination after six attempts will be required to restart the retraining process to achieve ACVS board certification in the alternate species and meet all requirements before being allowed any future attempts.

TAKING THE PHASE II EXAMINATION

Candidates sitting the examination for the first time (including Dual Certification candidates) must take both the case-based and practical sections. Candidates sitting the examination for the second or third time must take the sections not successfully completed. Both sections of the Phase II examination must be successfully completed to become certified by the American College of Veterinary Surgeons.

CERTIFICATION FOR SUCCESSFUL CANDIDATES

Candidates who pass the Phase II examination (as well as Phase I, if required for transitioning candidates) will be issued a time-limited certificate indicating that they are a Diplomate of the American College of Veterinary Surgeons in Small Animal Surgery or in Large Animal Surgery. Dual Certification candidates will be issued time-limited certificates indicating that they are a Diplomate of the American College of Veterinary Surgeons in the new species.

Time-limited certificates will be good for five (5) years. Diplomates with time-limited certificates will need to document continuous professional development through a variety of activities, such as attending or presenting at continuing education meetings, publishing manuscripts, serving on select ACVS committees, and participating in resident training. The [requirements for maintenance of certification](#) are posted on the ACVS website.

EXAMINATION SCHEDULE

The 2022 Phase II Surgical Competency Examination will be held at Pearson VUE Professional Test Centers. For candidates in the US and Canada, the exam will be held February 14–15, 2022. For candidates outside of the continental US and Canada, the examination will be held February 14–15 in Europe and February 15–16 in Australia due to continued travel restrictions.

Location	Date	Session
Virtual	To be determined	Examination Information Session
US, Canada, Europe	Monday, February 14	Small Animal Practical—Parts 1 and 2 Large Animal Case Based—Orthopedic/Neurosurgery and Soft Tissue
	Tuesday, February 15	Small Animal Case-based—Orthopedic/Neurosurgery and Soft Tissue Large Animal Practical—Parts 1 and 2
Australia/Japan	Tuesday February 15	Small Animal Practical—Parts 1 and 2 Large Animal Case Based—Orthopedic/Neurosurgery and Soft Tissue
	Wednesday, February 16	Small Animal Case-based—Orthopedic/Neurosurgery and Soft Tissue Large Animal Practical—Parts 1 and 2

EXAMINATION DESCRIPTION

The examination is composed of two (2) sections: case-based and practical. There are separate examinations for large and small animal candidates. Each section is administered in an approximately four-hour examination period, with an optional break of up to 15 minutes mid-way through.

- During the optional break, candidates may access food/snacks in their lockers, as well as medication and [comfort aids as defined by Pearson](#) (e.g., cough drops, inhaler, diabetic tools—see link for full list). Candidates are not permitted to access notes, phones, or study materials during the breaks. Food and drink are prohibited within the testing rooms.
- Candidates are allowed to take unscheduled breaks. Please note, however, that test time will not stop during unscheduled breaks. Unscheduled breaks are discouraged during the case-based exam as limited time is allowed for each “page” of questions and the candidate is not allowed to return to previous pages.

The Phase II examination tests all phases of surgery in all species and types of animals pertinent to the specialty (small animal or large animal) as well as competence in non-species-specific knowledge categories. The general content (and the weight of each content area) for the case-based and practical sections has been determined by means of an analysis of the veterinary surgeon's occupation. In all, five hundred twenty-four (524) American College of Veterinary Surgeons (ACVS) Diplomates participated in the study that examined the importance of a variety of content areas for performance as a veterinary surgeon. Questions for the Phase II examination are written and reviewed by the ACVS Examination Committee. Each question is validated by securing a reference source that corroborates the information in the question. The sources used comprise current veterinary textbooks, current veterinary medical and surgical journals, and current medical texts and journals including, but not limited to, the recommended reading list.

CASE-BASED SECTION

The case-based section will be comprised of two parts, orthopedic/neurosurgery and soft tissue. The case-based section tests the candidate's management of a sequentially presented surgical case(s) prior to, during, and after surgery. Candidates will be provided visual and descriptive information on the case and should be prepared to answer questions covering all areas of surgical practice. Each part of the case-based section will be administered over approximately 110 minutes, with a break of up to 15 minutes between parts. Each "page" of questions in the case-based section is allotted a pre-determined amount of time. As cases are presented in a sequential fashion, the candidate will not be allowed to return to a previous page after moving on to the next. Each part of the case-based section will be worth 250 points **and a minimum of 20% of the points for the examination will be based on the suggested reading of the current literature.** Questions are prepared each year by members of the Examination Committee. Examination Committee members and several members of the Board of Regents review all questions and visual materials for clarity and fairness. Each candidate's case-based examination section is graded according to a pre-set scoring guide by multiple Examination Committee members who are blinded to individual candidate identity.

PRACTICAL SECTION

The practical section will be comprised of a total of 32 questions based on visually presented material of surgically-related diseases or conditions. Candidates will be provided visual images (still and/or videos), as well as descriptive information for each question. Visual material may depict anatomic specimens, instruments, surgical diseases, pathologic/histologic specimens, imaging studies, or other relevant information to test the candidate's recognition and interpretive skills covering all areas of surgical practice. The practical section is split into two equal parts of 16 questions. Each part of the practical section will be administered over approximately 110 minutes, with a break of up to 15 minutes between parts. The candidate can progress through the first set of 16 questions at their own pace and can move freely forward and backward within these questions. After a short break the candidate begins the second set of 16 questions in a similar fashion but cannot return to part 1. Each question will be worth 12 points **and a minimum of 20% of the points for the examination will be based on the suggested reading of the current literature.** New questions are prepared each year by members of the Examination Committee to correspond to the topic areas in the examination blueprint. Examination Committee members and several members of the Board of Regents review all questions and visual materials for clarity and fairness. Each candidate's practical examination section is graded according to a pre-set scoring guide by multiple Examination Committee members who are blinded to individual candidate identity.

EXAMINATION RULES

The integrity of the Phase II Examination of the American College of Veterinary Surgeons will be maintained to ensure fairness to all candidates during the test. Any questions should be directed to Ann Loew, ACVS chief executive officer, at (301) 916-0200 x108 or the director of the Examination Committee.

REGISTERING FOR THE EXAMINATION

Complete registration for the examination consists of submitting the online application and paying the examination fee.

The deadline to apply for the examination is July 26, 2021. The online registration process must be completed by 11:59 pm Eastern Standard Time (EST). ACVS will not allow late submission of registration due to computer or internet issues.

The examination fee must be paid online no later than 11:59 pm EST, November 8, 2021. Mailed examination fee payments must arrive *by close of business (5 pm EST) on November 8, 2021* at the ACVS office. ACVS will not allow late payment due to delivery service problems, insufficient postage, international customs, computer/internet issues, etc.

SUBMIT THE ONLINE REGISTRATION APPLICATION

Deadline: Submit your application no later than **11:59 pm EST, July 26, 2021**.

Candidates must register online for the Phase II Examination at www.acvs.org/apply. Online registration opens July 8 for eligible candidates. During the application process, candidates will need to:

1. Provide their full name as it appears on a government-issue photo ID. Candidates are required to show one (1) VALID government-issue photo ID with signature at the test center. The name on the ID must match the name provided during the registration process exactly or the candidate will be turned away from the test center.
2. Provide their current address to assist with Pearson VUE appointment scheduling, as well as a mobile phone number.
3. Indicate whether they wish to [request an accommodation](#) for a disability or a health-related concern. Candidates requesting accommodations must indicate desired accommodations and upload **all** supporting documentation from an appropriate health care professional (e.g., physician, psychologist, psychiatrist) certifying the disability.
4. Agree to the terms and conditions of the **ACVS Phase II Surgical Competency Examination Contract**. Candidates who fail to agree with these terms will not be allowed to take the Phase II examination.
5. Indicate how the examination fee is being paid.

PAY THE EXAMINATION FEE

Deadline: Pay the examination fee online no later than **11:59 pm EST, November 8, 2021**. Mailed examination fee payments must arrive *by close of business (5 pm EST) on November 8, 2021*, at the ACVS office.

Fee for first-time candidates = \$2,055

Fee for repeat candidates = \$1,470

Available to candidates who have taken the Phase II examination/traditional Certification Examination previously or candidates who are in the dual certification process.

The examination fee is refundable only due to extenuating circumstances (see [Cancellation and Refund](#)).

- [Pay the fee online](#) using Visa or MasterCard
- Complete the [Phase II Payment Authorization Form](#)
 - Fax to: 301-916-2287
 - Mail to:

ACVS
19785 Crystal Rock Drive, Suite 305
Germantown, MD 20874
USA

CONFIRMATION

Candidates will receive an email upon successful submission of their online registration. Candidates who pay the examination fee online will receive an email upon completing the transaction. These emails note only receipt of the registration or payment and do not indicate that the registration process is complete. ACVS staff will review the registration application for completeness and contact candidates with any questions.

Candidates whose examination materials are in order will receive an *Examination Authorization* email from ACVS on or shortly before August 13, 2021. This email will include the Candidate ID number and Authorization ID number. Both numbers are required to schedule and take the examination at a Pearson VUE test center. Each candidate should review

carefully the information on the authorization email, as this information will indicate the sections of the examination for which the candidate is registered, and **it is the candidate's responsibility to notify the ACVS office immediately of any perceived inaccuracies.**

If a candidate submits a registration application and does not receive the Examination Authorization email from the ACVS office on August 13, the candidate should contact the ACVS office immediately. Note: Candidates are responsible for notifying the ACVS office of any address and email changes prior to and following the examination.

REQUESTING AN ACCOMMODATION

All candidates who intend to take the 2022 ACVS Phase II Surgical Competency Examination must indicate whether they wish to request an accommodation during the online registration.

ACVS complies with the Americans with Disabilities Act (ADA) of 1990 and the ADA Amendments Act of 2008. ACVS will provide certain accommodations for candidates when appropriate. If you have a disability and may require some accommodation in taking the examination, you must **complete all questions and upload required documentation in your application.** Accommodations must be requested in advance. Candidates who request accommodations will be notified separately of the determination. The Phase II examination is conducted at test centers. The test centers are not authorized to make accommodations that have not been approved by ACVS.

Accommodations are not required for items on [Pearson VUE comfort aids list](#).

ACCOMMODATION REQUESTS FOR DISABILITIES

Candidates who request an accommodation will need to indicate the type of disability, how long they have had the disability, and the type of accommodation requested. Additionally, past accommodations made in college or veterinary school must be indicated.

The following documentation must be uploaded into the online system. This documentation will be reviewed by select members of the Examination Committee, the examination consultant, and the staff liaison to the committee for the purpose of ensuring the correct documentation has been submitted and evaluating the request for the accommodation.

1. Written documentation from an appropriate health care professional (e.g., physician, psychologist, psychiatrist) certifying your disability and the accommodation being requested.
 - a) For physical or sensory disabilities of a permanent or unchanging nature (e.g., loss of limb, loss of hearing), documentation must include a brief statement from a qualified professional confirming the condition and describing the impact of the disability on the individual.
 - b) For disabilities of a non-permanent nature, written documentation must be current* and include:
 - i) a diagnosis of your health condition;
 - ii) when the diagnosis was originally made and reassessed, if applicable;
 - iii) a description of the assessment and a copy of the assessment; and,
 - iv) a specific recommendation and justification for the accommodation being requested.

*Current written documentation is defined as having been completed within the following timeframes:

- last five (5) years for learning disabilities (LD), autism spectrum disorder (ASD), or intellectual disability (ID)
- last three (3) years for attention deficit hyperactivity disorder (ADHD) and all other disabilities, excluding physical or sensory disabilities of a permanent or unchanging nature
- last six (6) months for psychiatric disabilities

2. Attach written documentation from the institution with the dates and special services and testing accommodations you received during the course of your education because of your disability.

ACCOMMODATION REQUESTS FOR HEALTH-RELATED NEEDS

Candidates who have special needs that are not generally covered by the ADA (e.g., injury, broken limb, pregnancy, lactation) may request courtesy accommodations and submit applicable materials with the application. Courtesy accommodations also include any requests to bring medical items or comfort aids not on the [Pearson VUE comfort aids list](#).

Candidates should indicate specific accommodations being requested and upload written documentation from an appropriate health care professional (e.g., physician) attesting to the health condition and supporting the accommodation being requested. This documentation will be reviewed by select members of the Examination Committee, the examination consultant, and the staff liaison to the committee to ensure the correct documentation has been submitted and evaluate the request for the accommodation.

SCHEDULING THE EXAMINATION AT A TEST CENTER

The Phase II examination is held at Pearson VUE test centers. For the 2022 examination, candidates may take the examination in their home countries. Candidates may schedule their test appointment online at www.pearsonvue.com/acvs or by telephone. To schedule online, you must first create a Pearson VUE web account. *Please note that account activation may require up to 24 hours.* Pearson VUE will notify you by email when your account is activated.

To schedule your examination and to create an online account, **you will need the Candidate ID and Authorization ID from your Examination Authorization email** (emailed by ACVS no later than August 13, 2021). Test appointments may be made up to one business day in advance but be aware that many test centers fill prior to the examination period. **You are encouraged to schedule your appointment as soon as you receive the account activation email from Pearson VUE.**

Please note that ACVS candidates are competing for space at test centers with candidates from other examinations. ACVS has made every attempt to authorize candidates as early as possible before the scheduled examination date. **Candidates should make appointments with Pearson VUE promptly after receiving their Examination Authorization email to ensure an appointment with minimal travel required.**

CANCELLATION AND REFUND

CANCELLATION DUE TO DENIAL OF CREDENTIALS BY ACVS

In the event that a prospective examinee's credentials application is not accepted by ACVS, the candidate must cancel their Pearson VUE appointment.

CANCELLATION DUE TO UNFORESEEN CIRCUMSTANCES FOR APPROVED CANDIDATES

In the event that a candidate needs to cancel their examination registration, the candidate must contact ACVS and cancel the Pearson VUE appointment.

NO-SHOW FEES

Failure to cancel the Pearson VUE appointment more than 24 hours prior to the scheduled start time will result in a no-show fee for which the individual is responsible. ACVS will invoice such candidates for the fee (\$100-300 per section,

depending on appointment length) following the examination dates or deduct the no-show fee from any refund of the examination fee.

REFUND REQUESTS

Examination fees will be refunded only in cases of extenuating circumstances (e.g., death in the family, medical emergency) and must be supported by written documentation. Documentation for medical emergencies must be from an appropriate health care professional attesting to the health condition and inability of the candidate to sit for the examination. No-show fees will be deducted from any refund if the candidate was not previously invoiced. Allow 30 days for processing refund requests. All requests for refunds must be submitted in writing using one of these methods:

ACVS
19785 Crystal Rock Drive, Suite 305
Germantown, MD 20874
USA
acvs@acvs.org
fax: (301) 916-2287

AT THE TEST CENTER

Candidates should refer to the most up-to-date details in their confirmation email from Pearson VUE, as well the Pearson website at <https://home.pearsonvue.com/coronavirus-update> for the latest policies and requirements.

1. Candidates should arrive at the test center 30 minutes before the scheduled appointment time. This will give you adequate time to complete the necessary sign-in procedures. Please be prepared to show one piece of current, government-issued identification, in the name in which you registered, bearing your photograph and signature. Acceptable forms of government-issued identification include photo-bearing driver licenses and passports.
2. If you arrive more than 15 minutes late for your appointment, you may be refused admission.
3. No personal items may be taken into the testing room. This includes all bags, books not authorized by the sponsor, notes, phones, pagers, watches, and wallets.
4. Giving or receiving assistance pertaining to information on the examination prior to, during, or after the test period is unethical and not permitted. (See [Examination Security](#).)
5. The use of information aids during the examination is not permitted.
6. Candidates will be provided erasable white boards to use during the examination.

TEST CENTER AVAILABILITY/CONTINGENCY PLANNING

The Phase II examination is offered only one time each year. In the event of widespread test center closures, ACVS will notify candidates as soon as possible of any alternative/contingency plans that have been enacted. ACVS cannot guarantee that alternatives will be offered.

2022 ACVS PHASE II EXAMINATION READING LIST

The following references and books are suggested reading in addition to the current Phase I reading list for preparation for the 2022 Phase II examination. Other textbooks and current references may be pertinent. Knowledge of basic and applied anatomy is assumed.

SELECTED REFERENCES FOR SMALL ANIMAL SURGERY

1. Guyton AC, Hall JE. Textbook of Medical Physiology, W.B. Saunders Co., (14th Ed), 2020. *Chapters 4-13, 16, 20, 22, 25, 30, 31, 37-43, 50, 61, 63-65*
2. Lumb and Jones. Veterinary Anesthesia and Analgesia, Blackwell Publishing, (5th Ed), 2015. *Chapters 1-36, 44, 45, 53-57.*
3. Fossum TW. Small Animal Surgery, Mosby Co., (5th Ed), 2018.
4. Boothe DM. Small Animal Clinical Pharmacology and Therapeutics, Elsevier, (2nd Ed), 2011. *Chapter 6 (Principles of Antimicrobial Therapy), Chapter 7 (Antimicrobial drugs), Chapter 19 (GI Physiology), Chapter 29 (Anti-inflammatory drugs).*
5. Johnson AL, Houlton JEF, Vannini R. AO Principles of Fracture Management in the Dog and Cat, AO Publishing, 2005. *Chapters 1, 2, 3, 20, 27.*
6. Johnston S, Tobias K. Veterinary Surgery: Small Animal, Elsevier, (2nd Ed), 2018.
7. Hermanson JW, Evans HE, de LaHunta A. Miller's Anatomy of the Dog, Elsevier, (5th Ed), 2019.
8. Kudnig ST, Seguin B. Veterinary Surgical Oncology, Wiley, 2012.

Revision

Guyton, Hall: new edition

SELECTED REFERENCES FOR LARGE ANIMAL SURGERY

1. Auer JA, Stick JA. Equine Surgery, Elsevier., (5th Ed), 2018.
2. Nixon AJ. Equine Fracture Repair, Wiley Blackwell, (2nd Ed), 2020.
3. Fubini SL, Ducharme NG. Farm Animal Surgery, W.B. Saunders Co., (2nd Ed), 2017.
4. McIlwraith CW, Nixon AJ, Wright I. Diagnostic and Surgical Arthroscopy in the Horse, Mosby Ltd, (4th Ed), 2014.
5. Ragle CA. Advances in Equine Laparoscopy, Wiley Blackwell, (1st Ed), 2012.
6. Theoret CL, Schumacher J: Equine Wound Management, John Wiley & Sons, (3rd Ed), 2017.
7. McIlwraith CW, Frisbie DD, Kawcak C, van Weeren R. Joint Disease in the Horse, Elsevier, (2nd Ed), 2016.
8. Knowledge of basic and applied anatomy is assumed and should be reviewed in an appropriate text; for example, Dyce KM, Sack WO, Wensing CJG. Textbook of Veterinary Anatomy, Saunders, 5th Ed (2018).
9. Knowledge of basic and applied physiology is assumed and should be reviewed in an appropriate text; for example, Cunningham J, Klein B. Textbook of Veterinary Physiology, W.B. Saunders Co., 6th Ed (2019); or Guyton AC, Hall JE. Textbook of Medical Physiology, W.B. Saunders Co., (14th Ed), 2021.

Revisions

Sample texts for basic and applied anatomy and physiology added, including Guyton, Hall.

Many journals contain articles pertaining to surgery (both human and veterinary) and should be perused for current literature. A partial list of veterinary journals includes:

JOURNALS FOR SMALL ANIMAL SURGERY CANDIDATES

- *Journal of Veterinary Emergency and Critical Care*
- *Journal of the American Veterinary Medical Association*
- *Journal of Small Animal Practice*
- *Journal of Veterinary Internal Medicine*
- *Veterinary Comparative Orthopaedics and Traumatology*
- *Veterinary Radiology & Ultrasound*
- *Veterinary Surgery*

JOURNALS FOR LARGE ANIMAL SURGERY CANDIDATES

- *Equine Veterinary Journal & Supplements*
- *Equine Veterinary Education*
- *Journal of the American Veterinary Medical Association*
- *Veterinary Radiology & Ultrasound*
- *Veterinary Surgery*

The majority of questions come from literature published in the last five years. For example, if you are taking the 2022 examination, questions will primarily come from literature published in the range of July 1, 2016–June 31, 2021. This date range is based on the publication of content in print rather than online publication date. Questions may also come from older publications considered landmark articles that are significant and essential to the knowledge of the veterinary surgeon.

PRACTICAL SECTION BLUEPRINT

Questions will pertain to surgical topics and conditions in:

- a) Small Animal Examination: Domestic canine and feline, and non-species-specific
- b) Large Animal Examination: Equine, food animal, small ruminant, camelid, and non-species-specific.

The test questions are distributed across a number of systems and categories. **The approximate percentage of questions devoted to each system/category is shown below:**

SMALL ANIMAL PRACTICAL SECTION BLUEPRINT

System/Category	% of Small Animal Questions
Gastrointestinal	16%
Cardiovascular/Hematopoietic	9%
Respiratory	13%
Urogenital	13%
Musculoskeletal	25%
Neurological/Special Senses	9%
Integumentary	9%
Endocrine	6%

LARGE ANIMAL PRACTICAL SECTION BLUEPRINT

System/Category	% of Large Animal Questions
Gastrointestinal	22%
Neurological/Special Senses	3%
Respiratory	16%
Urogenital	13%
Musculoskeletal	28%
Lameness and Imaging	3%
Cardiovascular/Hematopoietic	3%
Integumentary	6%
Surgical Preparation and Instrumentation	3%
Emergency and Critical Care	3%

EXAMINATION INSTRUCTIONS

An overview of the [Phase II examination navigation](#) is available online.

CASE-BASED SECTION INSTRUCTIONS

The case-based section tests surgical principles in case management prior to, during, and after surgery. Information about these cases is presented in the form of images, videos, and data. Images may be embedded in the page or may be accessed by clicking on the relevant hyperlink. Embedded images may be enlarged by clicking on the relevant hyperlink. Each “page” of questions in the case-based section is allotted a pre-determined amount of time. Candidates can move forward when they are finished with each page. If the candidate has not moved forward before the allotted time has run out, the screen will automatically show the next page. As cases are presented in a sequential fashion, the candidate will not be allowed to return to a previous page after moving on to the next. A white board will be provided for you to take notes during the examination. You can refer to these notes for the entire duration of the examination.

There is an optional 15-minute break between the orthopedic/neurosurgery and soft tissue portions of the case-based exam. It is strongly recommended that you not leave for any unscheduled breaks during either portion of the exam since questions cannot be revisited.

If a question asks for a specific number of responses, you will be graded on only the requested number of answers. Additional responses beyond the number requested will not be graded. For instance, if we ask you for one diagnosis and you give us two, we will grade only the first answer. Minimize the use of abbreviations to make sure your answer is clearly understood. Commonly used medical abbreviations may be used; however, if you are concerned that the grader may not understand the abbreviation, you should define it.

If technical difficulties are encountered during exam administration, candidates should notify the proctor. The proctor will follow up with ACVS, if needed, to determine the appropriate actions regarding timing and resumption of the examination.

PRACTICAL SECTION INSTRUCTIONS

The practical section is comprised of 32 questions divided into two parts of 16 questions each. Each question will have a set of images accompanying it. Based on the time allotted for answering all questions, we recommend spending no more than 5 minutes on a question to allow time for review. Candidates have 110 minutes for each part and may freely move forward and backward between questions within each part throughout the examination period. There is an optional 15-minute break between part 1 and part 2. Once part 2 has begun candidates may not return to questions in part 1. Images may be embedded in the page or may be accessed by clicking on the relevant hyperlink. Embedded images may be enlarged by clicking on the relevant hyperlink.

If a question asks for a specific number of answers, only that number will be graded. For example, if a question asks for two answers and you provide three answers, we will look at only the first two answers. Minimize the use of abbreviations to make sure your answer is clearly understood. Commonly used medical abbreviations may be used; however, if you are concerned that the grader may not understand the abbreviation, then you should define it.

If technical difficulties are encountered during exam administration, candidates should notify the proctor. The proctor will follow-up with ACVS, if needed, to determine the appropriate actions regarding timing and resumption of the examination.

LABORATORY DATA

- **“Interpret the laboratory data” or “Interpret the abnormal values”:** This means that you should indicate the most likely causes of each abnormality in this patient.

CASE EXAMPLE:

	Patient Values	Reference Range
Total protein (g/dl)	5.3	5.1 – 7.3
Albumin (g/dl)	3.0	2.6 – 3.5
Globulin (g/dl)	2.6	2.6 – 5.0
Alkaline phosphatase (U/L)	177	4.0 – 95
ALT (U/L)	363	26 – 200
Bilirubin (mg/dl)	0.25	0.1 – 0.3
CK (U/L)	211	92 – 357
BUN (mg/dl)	5	10 – 25
Creatinine mg/dl	0.7	0 – 1.3
Calcium (mg/dl)	9.6	9.5 – 11.8
Phosphorus (mg/dl)	4.5	3.3 – 5.8
Magnesium (mg/dl)	1.7	1.7 – 3.3
Glucose (mg/dl)	70	80 – 100
Cholesterol (mg/dl)	42	68 – 224
Bicarbonate (mmol/L)	18.6	13.9 – 30
Sodium (mEq/L)	148	146 – 160
Potassium (mEq/L)	4.8	3.5 – 5.9
Chloride (mEq/L)	118	108 – 125

1. Interpret the results of the chemistry profile.

Decreased BUN may be due to decreased production (e.g., hepatic insufficiency), lack of intake, or increased loss.

Decreased cholesterol may be due to decreased production (e.g., hepatic insufficiency) or increased loss.

Hypoglycemia may be due to decreased production (e.g., hepatic insufficiency) or poor sample handling.

Increased alkaline phosphatase may be due to increased production from bone (young dog) or cholestasis.

Increased ALT indicates hepatocellular injury/necrosis (leakage enzyme).

Results suggestive of hepatic insufficiency.

NOTE: Reference ranges will be provided for complete blood counts and serum chemistry panels. Reference ranges might not be provided for other laboratory data, such as blood gas analysis, electrolyte panels or fluid analysis.

DIAGNOSTIC IMAGING STUDIES

- **“List the radiographic abnormalities” or “List the radiographic findings”:** This means that you should concisely describe each abnormality that you see on the radiographs. Be sure to indicate the side for lesions that can be bilateral. If you observe no abnormalities, then you should state this.
- **“What is the radiographic diagnosis?”** This means to indicate the most specific conclusion that you can make from the radiographic findings.

CASE EXAMPLE:

Radiographic abnormalities: *The left osseous bulla is thickened and has increased soft tissue density.*

Radiographic diagnosis: *Left otitis media*

- **“Assess the fracture repair”:** This means that you should critique the repair including both positive and negative comments. This includes evaluation of the alignment, apposition or reduction, and apparatus or implants. For example:

CASE EXAMPLE:

Alignment is good. Reduction is not adequate because there is a gap at the fracture site. The most distal screw is too long.

SAMPLE QUESTIONS

[Sample practical and case-based examination questions](#) are available online.

DETERMINATION OF PASSING SCORE

The Border Group Method is used to set the passing score for the practical and case-based sections, given that the Angoff method (used on the Phase I examination) is not appropriate for the type of questions used in Phase II. The Border Group Method is a two (2) step process. In the first step, three (3) score categories are created: a pass, fail, and border group. These categories are based on practical and case-based examination scores for the past ten (10) years. The second step in the process is a decision exercise for setting the exact pass score within the border group. The decision exercise involves reviewing examinations within the border group relative to established criterion level performance (e.g., absence of fatal mistakes). That is, Examination Committee members identify examinations within the border group which do not meet the established criterion level performance and those which do. The cut score is then set at the lowest score on which an individual’s test performance meets the established criterion level of performance. Throughout the entire process a candidate’s performance is being compared only to this established criterion level of performance, and not to the performance of other examinees. All steps in the Border Group Method will be performed so that the decision makers are blind to the candidates’ names.

GRADING PROCESS

- Exams will be graded with the points assigned to each question. The data will be entered into a spreadsheet and double-checked. Point totals will then be calculated by the computer.
- After grading is complete, cut scores will be set by the border group method as described in the *Phase II Surgical Competency Examination Information Pamphlet*.
- For exams falling within 5 points of the cut score (once the cut score has been set), data entry will be rechecked. These exams will also be carefully reviewed by the Examination Committee members, referencing the exam key, to make sure that nothing was missed during the original grading process.

- If an error is found that changes the candidate's score, then the exam will be discussed, and the cut score may be revisited according to the border group method.

REPORTING OF RESULTS

Results of the American College of Veterinary Surgeons (ACVS) Phase II Surgical Competency Examination are customarily emailed to all candidates within six (6) weeks after completion of the examination. Results will indicate whether the candidate passed or failed each section of the examination (i.e., the practical and case-based). For candidates who fail, the feedback report will include performance on the areas within each section. Information regarding overall performance will be available from an appointed advisor for any candidate who fails a section of the examination. Advisors will not discuss performance on individual test items but may offer suggestions for improving performance on subsequent examinations.

ADVISOR ASSIGNMENTS

Candidates who do not pass the Phase II examination will be assigned an ACVS Examination Committee member as their advisor within 21 days of receiving their examination results. Upon request by the candidate, advisors will review the examination to identify areas of strength and weakness to provide guidance to the candidate in future attempts. It is the candidate's responsibility to contact their advisor and request a meeting to review their examination performance.

REQUESTS FOR RESCORING

Rescoring of the examination means that an employee of the examination consulting service reviews the examination to make sure that all scores were correctly calculated. **Candidates who wish to pursue rescoring of their examination must email ACVS (acvs@acvs.org) and the director of the Examination Committee within 60 days of notification by ACVS of the results. Prior to this communication, the candidate must have contacted and received feedback from their assigned advisor.** The director of the Examination Committee will provide additional details to help the candidate decide if they wish to pursue rescoring.

If the candidate still wishes to have their examination rescored after the communication with the director of the Examination Committee, they must contact the ACVS office and pay the rescoring fee within ten (10) days of that communication. The rescoring fee is \$500. The ACVS office will inform the examination service of the rescoring request upon receipt of the fee. Every effort will be made to complete the rescoring process and notify the candidate within seven business days of a paid request.

APPEAL PROCEDURE

If a candidate believes the Phase II examination results were adversely affected by extraordinary conditions during the examination, the candidate may appeal such determination by submission of a written petition for reconsideration as detailed in the *Protocol for Processing of Appeals*. The ACVS office must receive the petition within sixty (60) days of releasing results. Contact the ACVS office to receive the most current version of the protocol.

EXAMINATION SECURITY

PROCEDURES IN THE EVENT OF UNETHICAL BEHAVIOR

- a. The validity of results awarded to candidates for their performance on the American College of Veterinary Surgeons examination is protected by every means available. The American College of Veterinary Surgeons will not report results, which it has determined, are invalid (i.e., do not represent a reasonable assessment of the candidate's knowledge or competence sampled by the examination). The performance of all candidates is monitored and may be analyzed statistically for purposes of detecting invalid results.

- b. If evidence by observation or statistical analysis suggests that one or more candidates' results may be invalid or that exam security could have been compromised because of unethical behavior by one or more candidates prior to, during, or after the examination, the American College of Veterinary Surgeons will withhold the results pending further investigation. The affected candidate(s) will be so notified.
- c. Examples of unethical behavior affecting the validity of results or that would result in the withholding of results pending further investigation, would include, but not be limited to the following: (i) copying of answers from another candidate; (ii) permitting one's answers to be copied; (iii) unauthorized possession, reproduction, or disclosure of materials, including examination questions or answers from the current or previous years' examinations before, during, or after the examination; (iv) contact with unauthorized sources of information during the examination (i.e. notes, electronic devices, or other people) regardless of the intention; and (v) any other evidence indicating the security of the examination could have been breached.
- d. Notification of unethical behavior will be at the earliest possible time following completion of the examination. The candidate(s) will be advised of the procedure for imposing sanctions and informed that results may be withheld as invalid.
- e. On analysis of all available information in such circumstances, the American College of Veterinary Surgeons will make a determination as to the validity of the results in question and will notify the affected candidate(s). If it is determined that the results in question are invalid, they will not be released. Notification of that determination may be made to legitimately interested third parties.
- f. In such circumstances, the American College of Veterinary Surgeons will make every effort to withhold the results of only those candidates directly implicated in the unethical behavior. In some instances, the evidence of unethical behavior is sufficiently strong to cast doubt on the validity of all results, and this evidence may not enable the American College of Veterinary Surgeons to identify the particular candidates involved therein. In such circumstances, the American College of Veterinary Surgeons reserves the right to withhold the results of candidates not directly implicated in the unethical behavior during the investigation.
- g. Candidates or other persons who are directly implicated in an unethical behavior affecting the validity of the examination results or compromising examination security are subject to additional sanctions, including being barred permanently from all future examinations, termination of participation in an ongoing examination, invalidation of results of the examination, withholding or revoking certification, being prosecuted for violation of copyright laws, or other appropriate action. Candidates or other persons subject to such additional sanctions will be provided with written notice of the charges and an opportunity to respond to such charges in accordance with the procedures set forth in the *Procedure or Imposition of Sanctions on Candidates Accused of Unethical Behavior* section of this information pamphlet.
- h. Candidates or other persons who engage in other forms of unethical behavior, associated with any aspect of the examination, regardless of any impact on an individual's results, are also subject to the foregoing additional sanctions. Examples of such unethical behavior include, among other things: false statements to, or submission of, falsified documents to the American College of Veterinary Surgeons; the use of any falsified American College of Veterinary Surgeons' documents or the submission of such documents to other persons; or the offer of any financial or other benefit to any persons, officer, employee, proctor, or other agent or representative of the American College of Veterinary Surgeons in return for any right, privilege, or benefit which is not usually granted by the American College of Veterinary Surgeons to other similarly situated candidates or persons. Candidates or other persons subject to such additional sanctions will be provided with written notice of the charges and an opportunity to respond to such charges in accordance with the procedures set forth in the *Procedure or Imposition of Sanctions on Candidates Accused of Unethical Behavior* section of this information pamphlet.

PROCEDURE OR IMPOSITION OF SANCTIONS ON CANDIDATES ACCUSED OF UNETHICAL BEHAVIOR

- a. If the American College of Veterinary Surgeons has reason to believe that a candidate engaged in unethical behavior, the American College of Veterinary Surgeons shall provide written notice to the accused which will include: (i) the suspected unethical activity; (ii) the opportunity to defend against the charges in writing or at a hearing before a Special Committee of the American College of Veterinary Surgeons; and (iii) the sanction or sanctions which the American College of Veterinary Surgeons may impose if the accused fails to defend against the charges or, if after considering the defense, the Special Committee determines that the accused actually engaged in unethical behavior.
- b. Within twenty (20) days after receiving aforementioned notice, the accused shall advise the chief executive officer of the American College of Veterinary Surgeons, in writing, whether he or she wishes to defend against the charges and, if so, whether he or she wishes to make such a defense in writing or at a hearing. If the accused fails to respond, the American College of Veterinary Surgeons may impose on the accused any of the sanctions identified in the Examination Contract.
- c. Within twenty (20) days after receipt of the accused's request for an opportunity to defend against the charges, the chief executive officer of the American College of Veterinary Surgeons shall provide the accused with a written summary of the incriminating evidence, including copies of any relevant documentary evidence. If the accused has requested an opportunity to defend against the charges in writing only, the accused shall file his or her written defense with the American College of Veterinary Surgeons within thirty (30) days after issuance of the chief executive officer's written summary of evidence. The Special Committee of the American College of Veterinary Surgeons shall issue its written decision to the chief executive officer and the accused as soon as possible thereafter. If a hearing has been requested, the American College of Veterinary Surgeons shall schedule the hearing at a mutually convenient time and place before a Special Committee within thirty (30) days after issuance of the American College of Veterinary Surgeons' written summary of evidence, and the Special Committee shall issue its written decision as soon as possible thereafter.
- d. A Special Committee consisting of three (3) Diplomates appointed by the chair of the Board of Regents of the American College of Veterinary Surgeons, who were not involved in the investigation of the allegations against the accused, shall rule on the accused's defense and, if necessary, preside at the hearing. A transcript of the hearing, if any, shall be kept.
- e. The written decision of the Special Committee may be appealed in writing by the accused to the entire Board of Regents of the American College of Veterinary Surgeons within fifteen (15) days of the accused's receipt of such decision. The entire Board of Regents will review all of the evidence considered by the Special Committee, but it will not consider any evidence not previously presented to the Committee. The entire Board of Regents may affirm or reverse the decision of the Special Committee, remand the matter to the Special Committee for further consideration with precise instruction as to the basis of such reconsideration, or modify the sanctions imposed by the Special Committee. No person who served on the Special Committee shall vote or otherwise participate in the Board of Regents' review of the Special Committee's written decision.
- f. The Board of Regents will inform in writing the director of certification and the director of the Examination Committee of the final decision, including the salient reasoning behind the decision, within thirty (30) days of the final decision (after all appeal deadlines have expired or the appeal process has been completed).
- g. All notices or other correspondence directed to the American College of Veterinary Surgeons or the Special Committee should be sent to the office of the American College of Veterinary Surgeons, 19785 Crystal Rock Drive, Suite 305, Germantown, MD 20874-4700.