



**AUSTRALIAN AND NEW ZEALAND
COLLEGE OF VETERINARY SCIENTISTS**

FELLOWSHIP GUIDELINES

Equine Medicine

ELIGIBILITY

1. The candidate shall meet the eligibility prerequisites for Fellowship outlined in the *Fellowship Candidate Handbook*.
2. Membership of the College must be achieved prior to the Fellowship examination.
3. Membership may be in any discipline.

OBJECTIVES

To demonstrate that the candidate has sufficient training, experience, knowledge and accomplishment in Equine Medicine to meet the criteria for registration as a specialist in Equine Medicine.

RESPONSIBILITY

It is the candidate's responsibility to ensure they have fulfilled all the requirements of the training program guidelines prior to submitting their credentials for eligibility for examination.

LEARNING OUTCOMES

The candidate will be expected to have:

1. A detailed and broad knowledge of diseases of horses based on the experience of a substantial and appropriately documented case load;

2. A detailed knowledge of the structure, function and dysfunction of all equine organ systems in health and disease, including eyes, skin and reproductive organs, despite the other specialties in these areas;
3. A detailed knowledge of the aetiology, pathogenesis and pathophysiology of equine diseases;
4. A detailed knowledge of all relevant methods of diagnosis, treatment, management and prevention of equine diseases, and the ability to apply this knowledge with complete competence;
5. A detailed knowledge of applied clinical pharmacology and therapeutics in the treatment of equine diseases and performance disorders;
6. A detailed knowledge of equine husbandry including stud, racing, competition and pleasure horse practices as they affect horse health, welfare and performance;
7. A sound knowledge of poisonous plants, toxins, envenomations and the syndromes they cause in horses, with a focus on those encountered by horses in Australia and New Zealand;
8. A sound knowledge of epidemiological principles and their application to disease control programs and preventive medicine programs;
9. A sound knowledge of exotic equine diseases and their potential importance to Australia and New Zealand;
10. Candidates are expected to have a detailed level of expertise in the indications for and interpretation of radiology and ultrasonography. A sound knowledge of the indications for an interpretation of magnetic resonance imaging, computer tomography and nuclear diagnostic techniques is required.
11. Evidence of significant contributions to knowledge in the theory and/or practice of equine medicine. This is achieved through scholarly research and dissemination of findings through peer-reviewed publication and conference presentation(s). See Fellowship Blue Book for specific publication and presentation requirements.

EXAMINATIONS

Refer to the *Fellowship Candidate Handbook*, Section 5. The Fellowship examination has **four separate, autonomous components**:

- 1. Written Paper 1** (*Component 1*)
Principles of the Subject (three hours)
- 2. Written Paper 2** (*Component 2*)
Applied Aspects of the Subject (three hours)
- 3. Practical Examination** (*Component 3*)

Practical (three hours)

4. Oral Examination (*Component 4*)

Oral (two hours)

The written examinations will comprise of two separate three-hour written papers taken on two consecutive days. There will be an additional 20 minutes perusal time for each paper., In each paper you are provided with six (6) to nine (9) questions to answer each worth 20-30 marks, giving a total of 180 marks per paper. There is no choice of questions. Questions may be long essay type, a series of small sub-questions or multiple-choice questions. Marks allocated to each question and to each subsection of questions will be clearly indicated on the examination paper.

Written Paper 1:

This paper is designed to test the candidate's knowledge of the principles of the subject as described in the Learning Outcomes. Answers may cite specific examples where general principles apply but should primarily address the theoretical basis underlying each example.

Written Paper 2:

This paper is designed to a) test the candidate's ability to apply the principles of the subject to particular cases, problems or tasks and b) test the candidate's familiarity with current practices and issues that arise from activities within the discipline in Australia and New Zealand. Where clinical pathology results are presented, normal ranges will be provided.

Calculators may be used during the examination.

Practical Examination:

The practical examination is designed to test practical aspects of the Learning Objectives. Candidates will be required to compose written answers pertaining to the interpretation and management of case-based material presented. Case material may include pathology slides, clinical pathology results, radiographs, ultrasound, CT, MRI and other images/videos. Candidates must demonstrate deep understanding and practical application of procedures, equipment and diagnostic tests used in equine medicine. No perusal time will be given for the practical exam. The practical will consist of a series of ten (10) to twelve (12) questions with sub-questions, equating to a total of 180 marks. Marks allocated to each question and to each sub-section will be clearly indicated on the written paper.

Oral Examination:

The oral examination is designed to test the applicant's ability to evaluate case-based material and clearly communicate clinical reasoning in discussion of case presentations. Eight (8) to ten (10) cases are presented with supporting material with questions asked verbally. The oral examination has a total of 200 marks. Images, radiographs, ultrasound images, advanced imaging techniques and clinical pathology results are likely to be used during this examination.

TRAINING PROGRAMS

Refer to the *Fellowship Candidate Handbook*, Section 3.3.

In addition to the *Fellowship Candidate Handbook* stipulations:

1. The program should provide intensive training in equine clinical medicine, enabling the candidate to gain a sound detailed knowledge of equine anatomy and physiology together with a comprehensive knowledge of the aetiology, pathogenesis, pathophysiology, diagnosis, prognosis and treatment of diseases/conditions known to affect the equine species.
2. The candidate is expected to have a detailed level of expertise in performing and interpreting all aspects of any thorough equine clinical investigation. These procedural skills are listed in Appendix 2. This is not an exhaustive list and additional procedural skills may be added.
3. The candidate must be exposed to a sufficient number and variety of cases to acquire clinical proficiency in the treatment/management of a wide range of conditions with a thorough understanding of relevant clinical pharmacology.
4. The candidate must be involved in the management of a sufficient number of critically ill foals and adult horses to develop a detailed understanding of and proficiency in the intensive care required by such cases.
5. The candidate is required to meet the following **didactic learning requirements**;
 - a) **Seminars:** “Seminars” are local, face-to-face discussions and/or presentations that are provided at a Specialist (Fellow or Diplomate) level by Specialists or Residents. Seminars can include book club, morbidity/mortality rounds, journal club, and exam review sessions on a wide range of topics related to equine medicine. Seminars are Specialist-driven and a Specialist must be present for the entire session. The sessions should be **pre-scheduled**, and that time should be **protected time** for Specialists to actively participate in the Resident’s discipline knowledge development. Seminars must include ample opportunity for reciprocal discussion between Resident and a Specialist. Residents can present the material, prepare the seminar, and lead group discussions, but this must involve active participation of the Specialist in the preparation of resident-driven sessions.

Residents must accrue at least 100 hours of seminars over a 3-year residency program. All seminars must be clearly documented (i.e., date, title, location, presenter, and duration – see example). Sufficient progress toward this goal should be evident in the initial review.

- Clinic rounds about hospitalised patients *is not a seminar*.
- Student or resident case presentations *are not seminars*.
- Book Club or exam/topic review sessions without a specialist present *is not a seminar*.
- Tutorials, presentations, and other question and answer sessions given by specialists or residents are considered seminars provided there is active participation of a specialist.
- Journal Club (face-to-face OR online) where the resident presents an article and this is followed by *discussion and input from specialist/s is a seminar*.
- Online webinar or conference presentations given by Specialist on a subject pertinent to equine medicine *is a seminar providing the resident can directly interact with the presenter*.

- b) Continuing education:** Residents must average a minimum of 12 hours of continuing education related to Equine Medicine for each year of their residency training. This requirement can be met through participation in national or international conferences. No more than 50% of this requirement can be met through online courses.

The intent of this requirement is to ensure active participation of the Resident in formal continuing education by Specialists outside the Residents training program. All continuing education must be clearly documented (i.e., date, title, location, presenter, and duration). Continuing education hours may be logged during externship training in related disciplines.

6. The secondary supervisor is to adopt the primary supervision role in the absence of the primary supervisor for periods in excess of one week. How the secondary or auxiliary supervisor and candidate will interact needs to be documented in the training program document. In times where no supervisor is available, alternative arrangements for when the supervisors are absent for periods of more than one week must be made, such as the candidate reverting to indirectly supervised training during these periods.
7. For periods of supervisor absence of less than one week, when there is no approved backup supervisor, DST may still be suitable if there is a clear understanding that assessment of case management of patients that have been seen in the supervisor's absence should be discussed upon the supervisor's return. Such one-week supervisor absences will only count as DST if they occur no more often than at three-month intervals.
8. Supervision during after-hours emergencies may involve direct or indirect supervision. During the initial 12 months of the residency training program after-hours supervision must be direct if the cases managed are to count toward the activity log (residents may be responsible for all equine after-hours cases, therefore direct supervision is only required for equine medicine cases that are intended to be included in the activity log). If a supervisor considers the candidate competent (and the candidate is comfortable) than indirect supervision can commence prior to the end of the 12-month probation period (with cases being recorded in the Activity log); this must be noted in the candidates training progress updates.

TRAINING IN RELATED DISCIPLINES

Refer to the *Fellowship Candidate Handbook*, 2.4.2.

Candidates for Fellowship in Equine Medicine must spend time (core requirement; 4 weeks but no more than 18 weeks of the total training period) as stipulated by the *Fellowship Candidate Handbook* in equine ophthalmology, clinical pathology, anaesthesia and diagnostic imaging. Candidates may elect to spend time in any of the following related disciplines: surgery, dermatology, and anatomic pathology.

EXTERNSHIPS

Refer to the *Fellowship Candidate Handbook*, Section 2.4.1.

ACTIVITY LOG SUMMARY

The Activity Log Summary (ALS) should be kept in the format of Appendix 1, for body systems and Appendix 2, for technical procedures. All cases can only be entered in one category. No routine procedures, such as castrations or vaccinations, are to be included as only specialist-level activities may be recorded in the ALS.

Candidates must note the number of cases in each category and in parentheses the numbers of cases performed where they have been the primary clinician, as shown in the example templates in the appendices. In order to ensure that candidates have adequate exposure to cases, they must see a minimum of 500 cases in total during the entire training period, with a breadth of categories represented.

RECOMMENDED READING LIST

The candidate is expected to research the depth and breadth of the knowledge of the discipline. These lists are intended to guide the candidate to some core references and source material which represent a sound foundation for selective reading of information relevant to the discipline. Many recommended texts below cover similar material and the candidate, in consultation with his/her supervisors and mentor(s), should select appropriate material from these lists and other sources. The lists are not comprehensive and are not intended as an indicator of the content of the examination. The study of core texts and journals should be supplemented by study of other material to ensure an adequate knowledge of relevant applied and basic sciences and current literature. Some wider reading of related articles and materials not directly related to equine medicine will be of benefit. If uncertain of the breadth of reading required, the candidate should consult with their supervisor or mentor, or contact the Chief Examiner. Please look for the most current edition of each recommended text.

TEXTBOOKS

CORE TEXTBOOKS:

Equine Internal Medicine. 4th edition. Reed, SM, Bayly, WM and Sellon, DC
Saunders Elsevier, 2017

Equine Sports Medicine and Surgery. 2nd edition. Hinchcliff, KW, Kaneps AJ and Geor, RJ. Saunders Elsevier, 2014. Third edition available in April 2024.

Large Animal Internal Medicine. 6th edition. Smith, BP, Van Metre, DC and Pusterla, N. Mosby Elsevier, 2019

Robinson's Current Therapy in Equine Medicine. 7th edition. Sprayberry, KA and Robinson, NE. Elsevier Saunders, 2015

Equine Pharmacology. Cole, C, Bentz, B and Maxwell, L. Wiley Blackwell, 2015

Cardiology of the Horse. 2nd edition. Marr, C and Bowen, M. Saunders Elsevier, 2011

Equine Ophthalmology. 3rd edition. Gilger, B. Elsevier Health Sciences, 2016 and/or
Ophthalmology for the Equine Practitioner. 2nd edition. Brooks, DE. Teton
NewMedia, 2008

Equine Neurology. 2nd edition. Furr, M and Reed, S. John Wiley & Sons, 2015

Large Animal Neurology. 3rd edition. Mayhew, J. Wiley, 2022

Equine Dermatology. 2nd edition. Scott, DW and Miller, WH.Jr. Elsevier Health Sciences, 2010

Equine Infectious Diseases. 2nd edition. Sellon DC, Long M. Saunders Elsevier, 2007

Equine Emergencies: Treatment and Procedures. 4th edition. Orsini, JA and Divers, TJ. Elsevier Saunders, 2014

RECOMMENDED TEXTBOOKS

Adam and Stashack's Lameness in Horses. 7th edition. Baxter, GM. John Wiley & Sons, 2020

Clinical Radiology of the Horse. 4th edition Butler, JA, Colles,CM, Dyson, SJ.; Kold, SE and Poulos, PW. John Wiley & Sons, 2016

Guyton and Hall Textbook of Medical Physiology. 14th edition. Hall, J.E. Elsevier Health Sciences, 2020

Goodman and Gilman's The Pharmacological Basis of Therapeutics. 13th edition. Chabner, B.; Brunton, L. and Knollman, B. McGraw-Hill Education, 2017

Equine Anaesthesia: Monitoring and Emergency Therapy. 2nd edition. Muir, W.M.III and Hubbell, J.A.E. Elsevier Health Sciences, 2009

ADDITIONAL TEXTBOOKS

JOURNALS

CORE JOURNALS

Equine Veterinary Journal

Equine Veterinary Education

Journal of Veterinary Internal Medicine

Journal of the American Veterinary Medical Association

American Journal of Veterinary Research

Veterinary Clinics of North America - Equine Practice

RECOMMENDED JOURNALS

Proceedings of the American Association of Equine Practitioners

Australian Veterinary Journal

Australian Equine Veterinarian

New Zealand Veterinary Journal
Research in Veterinary Science

FURTHER INFORMATION

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Theriogenology															
Toxicology & envenomation															
Urinary tract															
Current TOTAL															
Previous TOTAL															
Cumulative TOTAL															

4 (3) Indicates 4 cases attended, 3 of which the candidate was the primary clinician.

Radiography																
Telemetry																
Tissue biopsy																
Thoracocentesis																
Tracheostomy																
Transtracheal aspiration	2 (2)	4 (2)	1 (1)	3 (3)	2 (1)	5 (4)	6 (4)	9 (7)	1 (1)	3 (2)	2(2)	2 (2)	40 (31)	22 (19)	62 (50)	
Ultrasonography																
Urine collection																
Other: specify (e.g. myelogram, pericardiocentesis, electrocardioversion, pulmonary function testing)																
Current TOTAL																
Previous TOTAL																
Cumulative TOTAL																

4 (3) Indicates 4 cases attended, 3 of which the candidate was the primary clinician

APPENDIX 1: DIDACTIC ACTIVITY LOG SUMMARY**TEMPLATE : Equine Medicine (By Seminar)****NAME:****SUBJECT:****DATE:**

Date	Title	Presenter / Location	Seminar type	Duration (hr)
03.09.2020	Wehrman et al. Objective evaluation of the systemic effects of topical application of 1% atropine sulfate ophthalmic solution in healthy horses. JAVMA, 2017	Uni of Qld Eq. Med JC/ via Zoom	Journal Club	1.00
10.09.2020	ACVIM/ECEIM Consensus Statement JVIM, 2014. Reef et al. Recommendations for Management of Equine Athletes with Cardiovascular Abnormalities.	Dr... - case examples - discussion Tutorial room CSU VCC	Book Club	1.00
11.09.2020	Antibiotic-induced colitis		M & M Rounds	1.00
16.09.2020	Guyton. Renal physiology		Book Club	1.20
17.09.2020	Mechanisms of antimicrobial resistance		Resident Rounds	1.00