



## 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 this field.

#### 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 thorough 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 thorough knowledge of the aetiology, pathogenesis and pathophysiology of equine diseases;
4. A thorough 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 thorough knowledge of applied clinical pharmacology and therapeutics in the treatment of equine diseases and performance disorders;
6. A thorough knowledge of equine husbandry including stud, racing, competition and pleasure horse practices as they affect horse health, welfare and performance;
7. A good 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 broad knowledge of epidemiological principles and their application to disease control programs and preventive medicine programs;
9. A knowledge of exotic equine diseases and their potential importance to Australia and New Zealand;
10. Evidence of significant contributions to knowledge in the theory and/or practice of equine medicine.

## **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 (four hours)
- 2. Written Paper 2** (*Component 2*)  
Applied Aspects of the Subject (four 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 four-hour written papers taken on two consecutive days. There will be an additional 20 minutes perusal time for each paper, during which no writing in an answer booklet is permitted. In each paper you are provided with eight (8) questions to answer each worth 30 marks, giving a total of 240 marks per paper. There is no choice of questions. Questions may be long essay type or a series of small sub-questions. Marks allocated to each question and to each subsection of questions will be clearly indicated on the written 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, images and 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 practical aspects of the Learning Objectives. Candidates will be asked to discuss case presentations in detail. Eight (8) to ten (10) cases are presented with supporting material and questions asked verbally in a face-to-face setting. The oral examination has a total of 200 marks. Images, radiographs, ultrasound images 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 general 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 acquire a high degree of clinical competence in performing and interpreting all aspects of any detailed equine clinical investigation.
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. There must also be sufficient exposure to critically ill foals and adult horses to enable the candidate to acquire proficiency in the intensive care required by such cases.

This includes but is not limited to: detailed clinical examinations; all diagnostic sampling procedures (various tissue biopsies and aspirates, atlanto-occipital punctures, lumbosacral punctures, bone marrow aspirates, tracheal and lung washes, peritoneal and pleural fluid collection, joint punctures etc.); various body system function tests; and be experienced in endoscopic, cystoscopic, gastroscopic, otoscopic and ophthalmoscopic examinations. The value of electrocardiography; radiology,

ultrasonography and nuclear diagnostic techniques and their interpretation as diagnostic modalities contributing to equine medicine must be understood.

4. The candidate should be involved in patient-oriented teaching rounds, regular teaching seminars, journal and text reviews. Clinically relevant didactic lectures and continuing education conferences should be attended where appropriate. Participation in regional, state, national and international meetings is encouraged.

## **TRAINING IN RELATED DISCIPLINES**

Refer to the *Fellowship Candidate Handbook*, 2.4.2.

Candidates for Fellowship in Equine Medicine must spend time as stipulated by the *Fellowship Candidate Handbook* in any or all of the following related disciplines: surgery, anaesthesia, radiology, ophthalmology, dermatology, clinical pathology, 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.

Categories to be included in the ALS are as follows:

- cardiovascular disease
- dermatologic disease
- emergency medicine
- endocrine, metabolic and hepatic diseases
- exercise physiology and sports medicine
- foal diseases
- gastrointestinal disease
- genetic disease
- haemolymphatic disease
- infectious disease
- musculoskeletal disease (including laminitis)
- neurologic disease
- nutrition
- ophthalmologic disease
- parasitology
- respiratory disease
- theriogenology
- toxicology
- urinary tract disease.

Suggested categories for technical procedures are as follows: anaesthesia and analgesia, collection of body fluids (eg abdominocentesis, bronchoalveolar lavage, thoracocentesis, transtracheal aspiration, urine collection, collection of joint fluid, collection of CSF, venous

and arterial blood samples), endoscopy, radiography, ultrasonography, advanced imaging (computed tomography, magnetic resonance imaging and scintigraphy), electrocardiography, gross necropsy examination, tissue biopsy techniques and fine needle aspiration.

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, it is expected that they would 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**

*Equine Internal Medicine*. 3<sup>rd</sup> edition. Reed, S.M.; Bayly, W.M. and Sellon, D.C. Saunders Elsevier, 2010

*Equine Sports Medicine and Surgery*. 2<sup>nd</sup> edition. Hinchcliff, K.W.; Kaneps A.J. and Geor, R.J. Saunders Elsevier, 2014

*The Equine Hospital Manual*. Corley, K. and Stephen, J. John Wiley & Sons, 2009

*Large Animal Internal Medicine*. 5<sup>th</sup> edition. Smith, B.P. Mosby Elsevier, 2015

*Robinson's Current Therapy in Equine Medicine*. 7<sup>th</sup> edition. Sprayberry, K.A. and Robinson, N.E. Elsevier Saunders, 2015

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

*Cardiology of the Horse*. 2<sup>nd</sup> edition. Marr, C. and Bowen, M. Saunders Elsevier, 2011

*Equine Ophthalmology*. Gilger, B. Elsevier Health Sciences, 2010 and/or  
*Ophthalmology for the Equine Practitioner*. 2<sup>nd</sup> edition. Brooks, D.E. Teton NewMedia, 2008

*Equine Neurology*. 2<sup>nd</sup> edition. Furr, M. and Reed, S. John Wiley & Sons, 2015

*Equine Pediatric Medicine*. Bernard, W.V. and Barr, B. CRC Press, 2011

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*Handbook of Equine Respiratory Endoscopy.* Barakzai, S. Elsevier Saunders, 2007

*Large Animal Neurology.* Mayhew, J. Wiley, 2008

*Equine Dermatology.* Scott, D.W. and Miller, W.H.Jr. Elsevier Health Sciences, 2010

*Adam and Stashack's Lameness in Horses.* 6<sup>th</sup> edition. Baxter, G.M. John Wiley & Sons, 2011

*Clinical Radiology of the Horse.* Butler, J.; Colles Dyson, , C.; Dyson, S.; Kold, S. and Poulos, P. John Wiley & Sons, 2011

*Animal Health in Australia - Volume 2: Chemical and Plant Poisons.* Department of Primary Industries and Energy, Bureau of Rural Resources. Australian Government Publication Service

*Animal Health in Australia - Volume 9: Exotic Diseases.* Department of Primary Industries and Energy, Bureau of Rural Resources. Australian Government Publication Service

*Guyton and Hall Textbook of Medical Physiology.* 12<sup>th</sup> edition. Hall, J.E. Elsevier Health Sciences, 2010

*Goodman and Gilman's The Pharmacological Basis of Therapeutics.* 12<sup>th</sup> edition. Chabner, B.; Brunton, L. and Knollman, B. McGraw-Hill Education, 2011

*Plants Poisonous to Horses.* Rural Industries Research and Development Corporation, 2006

*Equine Anaesthesia: Monitoring and Emergency Therapy.* 2<sup>nd</sup> edition. Muir, W.M.III and Hubbell, J.A.E. Elsevier Health Sciences, 2008

## **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*

*Compendium of Continuing Education for the Practicing Veterinarian*

*Proceedings of the American Association of Equine Practitioners*

*Australian Veterinary Journal*

*Australian Equine Veterinarian*

*Veterinary Record*

*New Zealand Veterinary Journal*

*Research in Veterinary Science*

## **FURTHER INFORMATION**

For further information contact the College Office

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**APPENDIX 1: ACTIVITY LOG SUMMARY**

**TEMPLATE : Equine Medicine ( By System)**

Refer to the Subject Guidelines for the appropriate Category listing. The following categories are examples only.

**NAME:**

**SUBJECT:**

**DATE:**

**Number of Cases**

CATEGORY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Current TOTAL	Previous TOTAL	Cumulative TOTAL
Cardiovascular Disease	4 (3)	0	0	0	0	0	1 (1)	5 (3)	20 (15)	12 (10)	25 (21)	12 (11)	79 (64)	50 (42)	129 (106)
Emergency Medicine	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)
Current TOTAL															
Previous TOTAL															
<b>Cumulative TOTAL</b>															

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



**APPENDIX 2: ACTIVITY LOG SUMMARY**

**TEMPLATE : Equine Medicine ( By Technical Procedure)**

Refer to the Subject Guidelines for the appropriate Category listing. The following categories are examples only.

**NAME:**

**SUBJECT:**

**DATE:**

**Number of Cases**

CATEGORY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Current TOTAL	Previous TOTAL	Cumulative TOTAL
Anaesthesia and Analgesia	4 (3)	0	0	0	0	0	1 (1)	5 (3)	20 (15)	12 (10)	25 (21)	12 (11)	79 (64)	50 (42)	129 (106)
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)
Current TOTAL															
Previous TOTAL															
<b>Cumulative TOTAL</b>															

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