

Ballarat Veterinary Practice – Equine Internship Programme

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1. The training needs of the applicant

The Ballarat Veterinary Practice Equine Clinic internship programme is an intensive learning plan designed to enhance practical skills and allow application of the theory taught at university.

The required supervision and appropriate teaching whilst learning these practical skills will be undertaken by registered specialists, senior surgeons and senior associate veterinarians, experienced nursing staff and will be conducted at the highest possible level.

The intern will be exposed to a wide variety of case material and a high volume of cases to allow their log of case experience to be accelerated in a short period of time.

The intern will receive a thorough, structured and supervised transition to veterinary practice, within a working well resourced environment.

2. The objectives of the competency-based training programme

The aim of the programme is to provide a high level of experience and advanced specialty training in equine surgery, anaesthesia, lameness diagnosis, ultrasound, endoscopy, and emergency medicine, and will provide the intern with an excellent grounding in equine veterinary science.

The ultimate goal is to prepare graduates for a successful career in the equine veterinary industry, whether that be through progression to a surgical residency, or a role as a general practitioner or racetrack veterinarian.

During the internship programme, the intern will undertake rotations through the various aspects of the practice and will keep a personal record of procedures performed.

The intern should expect an 18-month intensive post-graduation learning arena where there is an opportunity to enhance theory already taught, and achieve a high level of practical skills in the areas detailed in section 3 – Training tasks.

3. Training tasks

a. Anaesthesia

Preoperative assessment of horses to ensure they are a safe individual to undergo general anaesthesia. Learning intravenous anaesthesia techniques. Managing anaesthetic induction, maintenance and recovery. Learning set-up of gaseous anaesthesia equipment and performing general anaesthesia using gaseous anaesthesia, direct arterial blood pressure monitoring and the use of assisted ventilation whilst under general anaesthesia. Also training in the use of intravenous standing sedation techniques to allow major surgical procedures to be undertaken while standing.

b. Surgical

Full preoperative assessment and diagnostics of the surgical patient including the ability to create a prognosis for outcome prior to the surgical procedure. Patient preparation and preparation of the surgery suite before the beginning of surgery, assistance during surgery and teaching of basic surgical skills associated with all general equine surgery.

Importantly postoperative management and postoperative patient care involving medications, bandaging, wound care and reporting, as well as communication with clients regarding surgical procedures will be skills obtained.

Other tasks will include preparation for discharge including providing client instructions, dispensing of medication and explanation of their application, and the preparation of postoperative reports.

c. Diagnostic imaging

The following diagnostic imaging modalities will be taught:

i. MRI

The principles of MRI and image interpretation will be trained. Interns will assist with the acquisition of images.

ii. Scintigraphy

Principles of how to perform a scintigraphic examination in the horse, radiation safety information when working with horses undergoing bone scan scintigraphic procedures, pre and post scintigraphy works-ups with the specialists, interpretation of images and operation of the scintigraphy unit to collect images.

iii. X-ray and Digital Radiography

Training in anatomy of all areas where radiographs are used. Understanding occupational health and safety concerns with radiation. Training in collecting radiographic images and interpretation of these and also with digital radiography, interpretation and manipulation of the images to allow better diagnostic outcomes. Teaching of radiography will occur in several settings including surgical, field and clinical.

iv. Ultrasonography

Training in the use of advanced ultrasonographic equipment especially associated with lower limb injuries in horses and abdominal ultrasound for assessment of colic cases. Training in image collection, interpretation, storage and anatomy of the various regions would be expected.

v. Gastroscope and Video Endoscopy

Training in the operation of video endoscopic equipment, understanding the techniques used for both upper airway endoscopy and examination of the stomach. Also, training in undertaking dynamic endoscopic procedures associated with treadmill exercise of horses. Training in care and hygiene and biosecurity associated with respiratory tract procedures involving endoscopy.

d. Lameness assessments

Training in correct collection of the history associated with the clinical case. Hands on clinical examination, training in all aspects of palpation and common lameness conditions.

Training to perform diagnostic tests such as nerve blocks and joint blocks and a variety of manipulations to enhance the ability to find the cause of lameness and then an appropriate imaging plan and treatment plan for these cases and also appropriate recording of all work performed.

e. Clinical pathology

Collection of blood, synovial fluid and abdominal fluid and processing through automated machinery housed at the clinic and for sampling of various other bodily fluids that require external assessment.

Correct submission pathways to ensure samples are handled appropriately for delivery and with biosecurity measures undertaken.

f. Administrative tasks

The intern will be expected to collate histories, diagnostic pre-admission notes and participate in preoperative assessments. Immediate postoperative notes and discharge reports will make up part of the intern's tasks.

The intern will be required to have a thorough understanding and proficiency in client/patient management systems and will complete prompt billing and invoicing.

The intern will be required to understand and follow all OH&S protocol and maintenance of the S8 register.

Regular completion of a journal/logbook and maintaining a tally of the procedures performed is an expectation of the program (refer to section 9).

4. Required practice duties

The Animal Care & Veterinary Services Award 2020 requires an Employer to determine the responsibilities and clinical duties that are assigned to an internship. These form the 'required practice duties', which are the basis on which paid time is accounted.

As an intern, there is no overall case responsibility. This means, for the purposes of the internship, that responsibilities extend to time and activities that are related to treatment plans as set down by senior Veterinary Surgeons. This may include assisting with procedures, consultations and the recording of notes related to a case or appearing on behalf of the Practice to assess situations that may require the intervention of more experienced personnel. Activities such as observation, personal development, travel not involved in attendance at emergency cases, and general assistance in non-clinical matters are not deemed to be responsibilities.

In carrying out the responsibilities of the internship, clinical duties may include, but are not limited to:

- General horse handling
- Treatments
- Bandaging and wound management
- Dietary management

NOTE: During an internship, the responsibilities and clinical duties undertaken by an Intern will increase during the program. This occurs as the intern is deemed to be competent in more clinical areas. From a compliance perspective, the Practice may account for less paid time against salary during the earlier stages of the internship, off-set against greater time worked later in the program.

Competency in a training task will be achieved once the checklist has been marked as 'Competent' or 'Advanced' in all assessment categories, and signed off by the relevant Assessor (see Attachments 1 - 10).

5. Hours per week

The intern will be paid for a minimum of 38 hours per week, on a salaried arrangement.

The intern is also required to attend to the clinic after-hours on rotation to check on any critical patients and administer any late-night medications.

There is also time allowed for reading and research, in preparation for case reports and/or case series.

This time allocation will vary according to caseload. In addition, access to webinars, preparation of case studies, and research projects where appropriate will be available.

6. Approximate duration and timeframes of tasks

		Timeframe					
Task	Duration	Workplace based	Learning	Research	Observation		
a. Anaesthesia	18 months	3 months	3 hours ~	1 week **	2 weeks		
b. Surgical	18 months	18 months	18 hours ~	2 weeks **	18 months (assisting)		
c. Diagnostic Imaging							
i. MRI	2 months	2 months	3 days ~	2 days **	2 days		
ii. Scintigraphy	18 months	18 months	0.5 day ~	2 days **	2 days		
iii. Xray	18 months	18 months	0.5 day ~	2 days **	0.5 day		
iv. Digital radiography	18 months	18 months	0.5 day ~	2 days **	0.5 day		
v. Ultrasonography	12 months	12 months	0.5 day ~	2 days **	0.5 day		

vi. Gastroscope	6 months	6 months	0.5 day ~	1 day **	6 months
vii. Endoscope	6 months	6 months	0.5 day ~	1 day **	6 months
d. Lameness assessment	3 months	3 months	0.5 day ~	2 days **	3 months
e. Clinical pathology	12 months	12 months	0.5 day ~	1 day **	0.5 day

~ Learning time can be described as a lecture on each task specified in the table above. Usually these lectures would last approximately an hour, and would be delivered by surgeons or associate veterinarians following attendance at a CPD conference, or training seminar. Learning time could also involve case reviews and debriefs with specialists following surgeries.

** Clinical study culminating in a final research project will be based on a case seen by the intern at some point during the 24 month period. This project will be aligned with their specific field of interest, and will be agreed on with their mentor. For this reason the amount of time indicated in the above table to be spent on research is a guide only.

7. Learning time

As part of the formal teaching the intern will be given reading and research projects to extend case understanding. This reading will be partly completed during clinic time but also at home. Access to the clinic library is available. All reading material on the reading list is available at the practice and can be obtained at all times.

In addition, there will be one on one learning reviews with the mentor surgeons, as well as periodic inhouse seminars. These seminars/lectures would last approximately an hour, and would be delivered by surgeons or associate veterinarians following attendance at a CPD (Continued Professional Development) conference, or training seminar.

Animal handling training will be provided where needed, and the cost of this training will be covered by the annual CPD allowance granted to the intern.

Five days of paid CPD per annum is provided, and if a suitable conference is available the practice will pay the registration fee for the intern to attend as per practice CPD policy.

Single day seminars or visits to other clinics may also make up these five days that are allowed for paid CPD.

8. Location of the training

The training will be based at:

Ballarat Veterinary Practice Equine Clinic

54 Midas Rd

Miners Rest

Vic, 3352

Bruce O'Dell Breaking, Pre-Training and Equine Education

Baringhup Eddington Road

Eddington

Vic, 3472

9. Assessment and monitoring

The intern's training will be reviewed periodically, and will be monitored by the senior surgeons or senior associate veterinarians where appropriate.

Overview checklist of the tasks undertaken will be reviewed and discussed by both the intern and the assessor. See Attachments 1-10 for copies of assessment checklists.

Self-monitoring by the intern is required in the form of a detailed journal/logbook. The intern is expected to use the journal to keep a record of case experience, keep a tally of procedures performed, reflect on mistakes, record successes and set themselves goals. The journal will be used during periodic reviews and will provide a useful tool for both the intern and the assessor when discussing achievements and monitoring progress.

All reading material on the reading list is available at the practice and can be obtained at all times. There will also be access to further reference material and webinars.

Initials_____ Date____

10. Supervisors/Assessors

Dr Brian H. Anderson (Specialist in Equine Surgery) B.V.Sc., M.V.Sc., M.S., Diplomate A.C.V.S

BVSc with distinction 1986 (Massey University New Zealand), MVSc in Equine Pharmacology and internship in equine medicine and surgery 1989-1991 (Massey University New Zealand), Resident in Large Animal Surgery and MS degree 1991-1994 (University of Minnesota USA), Diplomate American College of Veterinary Surgeons 1996 in Large Animal Surgery and Specialist in Equine Surgery Victoria Australia 2009, Lecturer and Senior Lecturer in Surgery 1996-2000 Massey University.

Brian joined the Ballarat Veterinary Practice in September 2000 via the Sydney Olympics where he was one of two vets looking after the dressage and show jumping teams. He became a partner in the practice in 2003 and has established with Ian Fulton, Andrew Cust and former partners the equine hospital and referral service that is today one of Australia's leaders in the field of equine veterinary services.

Brian has many years of experience in upper respiratory tract, orthopaedic and soft tissue surgery. He was the endoscopic consultant for New Zealand Bloodstock from 1996-2002 where he examined and adjudicated on the sales examination of the upper respiratory tract of thousands of thoroughbred yearlings. He has published the results of normal and abnormal function of the larynx in young thoroughbreds and described the cause and outcome of disease affecting the arytenoid cartilages (arytenoids chondritis). He has over twenty years' worth of experience and expertise in the field of Nuclear Scintigraphy (Bone Scanning) and referral lameness evaluation.

To help his clients achieve the best results, Brian strives to keep abreast of many new techniques and in the last 12 years has updated his skills in the area of stem cell and regenerative medical technology for tendon/ligament repair, and specialist stifle arthroscopic techniques. Brian also underwent further specialist training in equine laparoscopy in both Australia and the United States, which lead to the introduction of this innovative procedure to the practice in 2010.

Brian is interested in developing methods and techniques for performing standing surgery (which avoids the risks and cost of general anaesthesia) and now perform a number of techniques in the standing sedated horse, including spine surgery, laser surgery of the upper respiratory tract, sinus surgery of the head, articular facet injections of the neck and back, skin grafts, eye enucleation, sarcoid therapy and wound repair.

Brian is one of the leading sales veterinarians in Australia when it comes to presale evaluation of
radiographs and services some of Australia's top buyers.

Brian is an invited speaker and he presents frequently to other veterinarians in Australia andinternationally on topics relating to equine surgery and on results of research and clinical conditionsevaluatedattheBallaratVeterinaryPractice.

Dr Vivian Quam, DVM, MA

Vivian attended the University of Georgia for veterinary school where she graduated with an emphasis in large animal veterinary medicine. Following graduation from veterinary school, Vivian completed an equine internship at the Ohio State University that allowed her to gain experience in an ambulatory as well as referral hospital setting. In addition to routine primary care, the ambulatory service included a specialist and trainee in sports medicine and dentistry, respectively, providing exceptional opportunities for providing quality care for equine companions and athletes in the field and the hospital. Vivian stayed at the Ohio State University following her internship for equine surgery residency where her case load was robust and consisted of many arthroscopic, laparoscopic, upper airway, and urogenital procedures as well as colic surgeries and complex wounds and laceration repairs.

Vivian has conducted research focused on equine lameness and tendon healing and is near completion of a MS degree, during which she isolated and characterized progenitor cells from DDFT at the navicular region. This research pursuit gave Vivian the opportunity to work extensively with equine cell culture and aligns with her keen interest in treating lameness in the equine athlete.

Vivian's ACVS-funded project aims to characterize the response of navicular bone fibrocartilage and DDFT to extracellular vesicles isolated from mesenchymal stem cells. Vivian's aim is to practice highquality, evidence-based medicine for the betterment of equine health and client satisfaction.

Dr Massimo Delli-Rocili DVM, DVSc, DACVS (Large Animal)

Massimo graduated in 2014 from Cientifica del Sur in Lima, Peru, with a Doctor of Veterinary Medicine.

Massimo completed a one-year equine internship in Chino, California. He then moved to NZ, and undertook an equine internship at Massey University and afterwards worked as an Equine Field Veterinarian for six months.

Massimo completed a large animal surgical residency and obtained a Doctorate of Veterinary Science (DVSc) from the Ontario Veterinary College in Canada in 2020. He became a member of the American College of Veterinary Surgeons (ACVS) in early 2021 allowing him to become a registered specialist in equine surgery in North America.

Massimo has had several articles published, including an article in Canadian Veterinary Journal (2020) 'Diagnostic imaging of a Basi hyoid bone fracture and partial avulsion of the medial pterygoid muscle in a horse' and received first place in 2019 at the ACVS Annual Surgery Summit in Las Vegas, for his scientific poster presentation.

Dr Andrew Cust BSC, BVSc (Hons), MVSc, GAICD

Andrew grew up on a horse stud in Victoria, played polo in Australia and overseas and has also worked casually for Racing Victoria and Harness Racing Victoria, officiating at race meetings.

After completing a Bachelor of Science at Latrobe University and spending some time travelling the world, Andrew went on to study Veterinary Science at the University of Melbourne and graduated in 2001.

Andrew started his career at the Kilmore Veterinary Practice, initially working with both large and small animals. Andrew then moved to Macau, China, to live and work for the Macau Jockey Club, working with 1,000 horses stabled at the Macau racetrack.

In 2008, Andrew returned to Australia commenced his time with BVP. Andrew completed his Master's of Veterinary Studies in 2009, focussing on the relationship between equine hoof conformation and racing performance.

Andrew joined BVP practice partnership in July 2010.

Andrew has attended a conference on "The Functional Hoof 2014", a five-day dental workshop to become a member of Equine Dental Vets Australia (2015) and completed the examinations to become an FEI Permitted Treating Veterinarian (PTV).

Andrew graduated from the Australian Institute of Company Directors in 2018.

11. Attachments 1 - 12

Attachment 1

Assessment Checklist – Anaesthesia

	Below standard	At standard	Competent	Advanced
Preoperative Assessment				
Intravenous injection technique				
Performance of intravenous anaesthesia				
Set-up of gas anaesthetic equipment				
Performance of anaesthesia using gas				
Monitoring of blood pressure				
Monitoring of assisted ventilation				
Monitoring of anaesthetic depth				
Standing sedation technique				
Maintenance of anaesthetic equipment				
Understanding of required readings				

Required reading list:

- Equine Anaesthesia, 2nd Ed (Muir and Hubbell) Elsevier Inc, 2009
- Handbook of Equine Anaesthesia, 2nd Ed (Taylor and Clarke) Elsevier Inc, 2007

Signed by Assessor:

Date:

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Date: _____

Assessment Checklist – Surgical

	Below standard	At standard	Competent	Advanced
Preoperative assessment of patient				
Ability to predict prognosis for outcome of surgery				
Preparation of patient for surgery				
Knowledge of infection control and sterilisation				
Knowledge of biohazard disposal				
Assistance during surgery				
Basic surgery skills				
Postoperative management of patient				
Administering of postoperative medications				
Wound care, including dressing				
Preparation of discharge instructions				
Communication with owners/clients				
Understanding of required readings				

Required reading list:

- Equine Surgery, 5th Ed (Auer, Stick, Kummerle & Prange) Elsevier, 2019
- Diagnostic and Surgical Arthroscopy of the Horse, 4th Ed (McIlwraith, Nixon, and Wright) Elsevier 2015
- Advances in Equine Laparoscopy (Ragle) Wiley-Blackwell, 2012

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Assessment Checklist – MRI

	Below standard	At standard	Competent	Advanced
MRI technique				
Care of MRI equipment				
Administering of sedatives and required MRI medications, including IV				
Insertion of catheter				
Handling of horse under sedation				
Ability to appropriately instruct assisting nurse				
Interpretation of MRI results – T1				
Interpretation of MRI results – T2				
Assistance during collection of MRI images				
Understanding of required readings				

Required reading list:

• Equine MRI (Murray) Wiley-Blackwell, 2011

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Date:

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Assessment Checklist – Scintigraphy

	Below standard	At standard	Competent	Advanced
Preparation of horse for scintigraphy – night before procedure				
Preparation of horse for scintigraphy – day of procedure				
Preparation of scintigraphy room				
Administering sedation				
Performance of scintigraphy examination				
Ability to instruct assisting nurse				
Knowledge of radiation safety				
Interpretation of scintigraphic images				
Overall operation of scintigraphy machine				
Maintenance of room sanitation (disposal of urine etc)				
Understanding of required readings				

Required reading list:

• Equine Scintigraphy (Dyson, Pilsworth, Twardock and Martinelli) Equine Veterinary Journal, 2003

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Assessment Checklist – X-ray & Digital Radiography

	Below standard	At standard	Competent	Advanced
Knowledge of all anatomy where x-ray and DR are required				
Knowledge of radiation safety				
Correct application of personal protective equipment for nurse & vet				
Collection of radiographic images				
Anatomical positioning technique				
Interpretation of images collected				
Manipulation of radiographic images				
Ability to provide diagnosis following x-ray/DR				
Ability to provide prognosis following x-ray/DR				
Understanding of required readings				

Required reading list:

- Atlas of Diagnostic Radiology of the Horse, 2nd Ed (Dik and Gunsser) Schlutersche, 2001
- Clinical Radiology of the Horse, 2nd Ed (Butler, Colles, Dyson, Kold, and Poulos) Wiley-Blackwell, 2000

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Assessment Checklist – Ultrasonography

	Below standard	At standard	Competent	Advanced
Knowledge of all anatomy where ultrasound is required, particularly cross-sectional				
Use of advanced ultrasonographic equipment – lower limb				
Assistance with appropriately settling the animal				
Care of ultrasound equipment				
Colic assessment – abdominal ultrasound technique				
Ability to collect readable images				
Interpretation of results				
Storage of images				
Understanding of required readings				

Required reading list:

• Equine Diagnostic Ultrasound (Reef) Saunders, 1998

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Assessment Checklist – Gastroscope & video endoscopy

	Below standard	At standard	Competent	Advanced
Knowledge of all anatomy where gastroscope and endoscope are required				
Operation of video endoscopic equipment				
Understanding of upper airway endoscopy				
Understanding of endoscopic examination of the stomach				
Ability to undertake dynamic treadmill exercise endoscopic procedure				
Care, hygiene and biosecurity of respiratory tract endoscopy				
Care of endoscope equipment				
Ability to collect readable video images				
Interpretation of results				
Storage of images				
Understanding of required readings				

Required reading list:

• Atlas of Equine Endoscopy (Slovis) Mosby, 2004

Signed by Assessor:

Date:

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Assessment Checklist – Lameness assessment

	Below standard	At standard	Competent	Advanced
Collection of history associated with the case				
Clinical examination technique				
Knowledge of all aspects of palpation and common lameness conditions				
Ability to detect heat, pain and swelling				
Performance of diagnostic tests – nerve block				
Performance of diagnostic tests – joint block				
Flexion testing technique				
Ability to perform hoof tester response				
Ability to diagnose the cause of lameness				
Appropriate use of lameness grading				
Ability to recommend imaging and treatment plan				
Recording of work performed				
Understanding of required readings				

Required reading list:

Date:

• Adams and Stashak's Lameness in Horses, 6th Ed (Baxter) Wiley-Blackwell, 2011

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Assessment Checklist – Clinical pathology

	Below standard	At standard	Competent	Advanced
Collection of blood				
Collection of synovial fluid				
Collection of abdominal fluid				
Processing of collected fluids through pathology equipment				
Appropriateness of fluid handling				
Promptness of sample delivery for external testing				
Use of internal laboratory testing equipment				
Knowledge of biosecurity protocols				
Interpretation of patient data				
Recording of work performed				
Understanding of required readings				

Required reading list:

- Diagnostic Cytology and Hematology of the Horse, 2nd Ed (Cowell and Tyler) Mosby, 2002
- Equine Internal Medicine, 3rd Ed (Reed, Bayly, and Sellon) Elsevier, 2010

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Date:	
Signed by Intern:	
Date:	

Assessment Checklist – Administration

	Below standard	At standard	Competent	Advanced
Collation of histories, diagnostic pre-admission notes and assessments				
Immediate post-operative notes				
Discharge reports				
Prompt billing and completion of invoices				
Proficiency in use of systems including, ezyvet and Smartflow				
Awareness of, and adherence to, OH&S protocol				
Maintenance of S8 register				
Completion of journal/logbook including tally of procedures performed				

Required:

• Successful completion of ezyvet and SmartFlow training

Signed by Assessor:

Date:

Signed by Intern:

12. Intern Agreement



|

hereby acknowledge that I have received and read

this document (entitled Ballarat Veterinary Practice – Equine Internship Program) and its attachments, and that I fully understand the following:

- a. the goals of the internship program and the expectations of both myself and Ballarat Veterinary Practice;
- b. the time devoted to required practice duties and a mechanism to respond to additional requirements;
- c. the provision and type of structured training and supervision and whether this includes formal teaching time (such as lectures and tutorials); and
- d. the access that I will have to the practice for observation and study.

Signed _____

Print name _____

Date ____/20____