

<b>REF. NO.</b>	<b>C-VO.2</b>
<b>TITLE:</b>	<b>PRODUCTION ANIMAL AND EQUINE OPTHALMOLOGY</b>
<b>VALUE:</b>	<b>10 CREDITS</b>
<b>NOTIONAL STUDY HOURS:</b>	<b>100</b>

This module is intended to cover the theoretical knowledge of both Production Animal and Equine Ophthalmology. It is understood that while candidates will be able to complete the theoretical knowledge covered for both species, candidates may choose to focus their practical cases on one species only.

Candidates will be expected to have a sound understanding and knowledge of ophthalmology as it relates to the more common production animal species but candidates should also be aware of ophthalmic conditions affecting other less common species used as production animals.

A Production Animal is defined as any animal farmed for the purpose of the production of meat or other animal products (including milk, eggs and fibre).

#### **GENERAL GUIDANCE NOTES**

Before embarking on this, or other modules, candidates must fulfil the following criteria:

- a) Candidates should hold a veterinary qualification which would entitle them to register as a member of RCVS
- b) Candidates should have at least one year's experience working in veterinary practice before enrolling for any module. Candidates graduating in 2007 or later will be expected to have completed the RCVS Professional Development Phase (PDP) before enrolling for any modules.
- c) Candidates should enrol with the RCVS if intending to take the full Certificate in Advanced Veterinary Practice (enrolment will be valid for 10 years)

### **SPECIFIC GUIDANCE NOTES FOR OPHTHALMOLOGY MODULE**

- a. Ophthalmology candidates are encouraged to join the British Association of Veterinary Ophthalmologists and to have been members for at least one year before credit for this module is awarded.
- b. Candidates are encouraged to subscribe to the Veterinary Ophthalmology journal.
- c. It is recommended that candidates should have spent at least 15 hours per annum on ophthalmology-related CPD for at least one year. This could include meetings and presentations relevant to ophthalmology, attendance on relevant ophthalmology courses, and home study.
- d. It is recommended that candidates should have spent at least 15 hours seeing ophthalmic practice with suitably qualified ophthalmologists. The candidate should direct this time primarily towards improving his or her diagnostic skills using the range of diagnostic instruments outlined in the Equipment section

### **PREPARING FOR A C MODULE**

Before embarking on any module, candidates are advised to plan a structured programme of continuing professional development to help them achieve their objectives. Involvement in networks of other candidates working towards the same or similar modules is encouraged and, where possible, RCVS will assist candidates who wish to be put in contact with others studying towards this and other related modules. Candidates are advised to find a suitable adviser/mentor to support them through the programme, especially if they are working towards it on a 'self-study' basis. Candidates are free to choose their own advisers/mentors, or they may wish to enrol on a course offered by a university or by other CPD providers, where tutorial or supervisor support is available.

### **GUIDANCE FOR THIS MODULE**

This module may be taken individually, or it may be integrated with others. Most candidates will wish to complete the A module, Professional Key skills, and at least one of the B modules, before undertaking a C module, although candidates can choose to work through modules in a different order if they wish.

Universities and other CPD providers may offer courses which support this module as a self-standing course or may wish to combine it with others as part of a longer study programme.

Whichever order modules are tackled in, compliance with best practice for all the topics covered by module A-PKS.1 will be expected whenever these are appropriate in C modules. For example, awareness of and compliance with all relevant legislation, welfare and ethical principles will be required throughout.

The aim of the module is to enable the candidate to extend and consolidate clinical knowledge and skills gained at undergraduate level, and to develop an increased understanding of their application in a practice environment in relation to small animal ophthalmology. There is some overlap with the module in small animal ophthalmology.

### EQUIPMENT

Candidates will need to be in possession of, or have daily access to the following instruments:

- direct ophthalmoscope
- condensing lens(es)
- focal light source e.g. Finhoff transilluminator
- tonometer
- magnifying loupes of at least 2X magnification.

Candidates should, where possible, have routine access to a slit lamp, or alternatively make themselves familiar with its use when seeing practice with their adviser.

### ASSESSMENT

*It is suggested that this module could be assessed by the following methods:*

- A case log of 75 production animal and equine ophthalmology cases managed by the candidate, of which at least 10% should be surgical cases. These may include cases that are referred for surgery to a referral ophthalmologist. Group outbreaks of ophthalmological disease can be included in the case log but should be classified as a single case. The case log is intended to demonstrate that the candidate has had a reasonably wide range of experience across the areas of the syllabus, and has met the learning objectives of the module. Attention is drawn to section 5 of the syllabus, ocular surgery, which describes the types of procedures candidates will be expected to cover.
- A **case book** of five cases, each of up to 1000 words in length, covering a range of ophthalmological conditions and procedures as described in the syllabus. Group outbreaks of ophthalmological disease can be included in the case book but should be classified as a single case.
- A practical assessment based on a series of slides in conjunction with a question and answer component.

### MODULE OBJECTIVES

At the end of the module, candidates should be able to:

- Thoroughly understand the basic anatomical, physiological, immunological and pathological processes involved in ocular disease, including the relationships between the eye and the overall health status of the patient.
- Show thorough familiarity with the clinical presentation of the common ocular conditions affecting production animals and horses.
- Understand and promote concepts of preventative health care relating to the discipline.

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- Review and constructively criticise current literature relating to the discipline to enable them to determine its relevance to their current practice.
- Use available resources and communicate with owners in such a way as to achieve optimum results in their practice circumstances in relation to those ophthalmological cases that are suitable to be managed in practice and which would not significantly benefit from referral to an ophthalmic specialist.
- Review the outcomes of at least part of their clinical work, using the process of clinical audit in order to improve performance.
- Recognise when a case is truly unusual, and become familiar with the information resources available to enable them to deal with such cases in the most appropriate way, including referral to an ophthalmic specialist where indicated.
- Recognise when a case is beyond their personal or practice capabilities, and provide an effective channel of referral.

## SYLLABUS

### 1. STRUCTURE AND FUNCTION OF THE EYE

- **Embryology**

Candidates are expected to have a basic understanding of ocular embryology as it applies to the more common developmental abnormalities of the eye and adnexa in production animals and horses.

- **Anatomy and physiology**

A sound understanding of applied anatomy and physiology of the eye, adnexa and orbit in production animals and horses.

### 2. EXAMINATION OF THE EYE

Candidates will be expected to have a thorough working knowledge of basic ocular examination techniques, in particular:

- 'hands-off' assessment of the eye and adnexa
- 'hands-on' assessment including examination of the eyelids, ocular surface, anterior segment and lens (employing focal and general illumination and distant direct ophthalmoscopy), examination of the vitreous and fundus using direct ophthalmoscopy and indirect ophthalmoscopy.
- Use of local nerve blocks to facilitate ophthalmic examination
- Pre-purchase ophthalmic examination in horses

In addition, candidates should have a sound understanding of pre-ocular tear film investigation (including use of the Schirmer tear test), the use of fluorescein staining techniques, tonometry, biopsy and exfoliative cytological techniques. Candidates should be familiar with systematic case recording methods.

### 3. DISEASES OF THE EYE AND ADNEXA

Candidates should be able to demonstrate:

- A sound knowledge of the common conditions affecting the upper and lower eyelids, the third eyelid, lacrimal system, cornea, episclera and sclera, uveal tract, lens, vitreous, retina and choroid, optic nerve, orbit and periorbita.
- A good working knowledge of neuro-ophthalmological conditions and ocular neoplasia (both primary and secondary).
- A sound appreciation of how to recognise and deal with various types of ocular trauma.
- Understanding of the importance of the potential for involvement of the eye in systemic diseases and have a working knowledge of the more common diseases which may be involved in such cases.
- Understanding of the health, welfare and economic implications of ophthalmic disease in group outbreaks (including infectious, toxic, nutritional causes) and have a working knowledge of the more common diseases which may be involved in such cases, including treatment, control and preventative measures.

### 4. THERAPEUTICS

A sound knowledge of ocular therapeutics in production animals and horses, including:

- routes of administration of ocular therapeutic agents, including placement and use of subpalpebral lavage systems
- the various vehicles and preparations available (including cleansing agents lubricants and tear replacement preparations)
- topical anaesthetics, local anaesthetic nerve blocks, mydriatic cycloplegics
- agents used in the treatment of equine glaucoma
- antibacterials, antifungals, antivirals, parasiticides, steroidal and non-steroidal anti-inflammatory agents
- systemic and topical immunosuppressants.

Candidates should have some theoretical knowledge of the techniques of cryotherapy, electrocautery, and the potential for use of lasers in some ocular conditions

### 5. OCULAR SURGERY

- Consideration should be given to the instruments, suture materials and magnification required for extraocular surgery. Candidates should have a basic knowledge of the principles of ophthalmic surgery. Candidates should be aware of what and when to refer.
- A sound knowledge of the following procedures would be expected:

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- wedge resection of the eyelid e.g. for removal of neoplasms/shortening of the eyelid
- techniques for management of periocular sarcoids in horses
- techniques for management of ocular and periocular squamous cell carcinomata in horses
- techniques for management of periocular tumours in production animals, in particular squamous cell carcinomata in cattle
- primary closure of eyelid lacerations
- entropion correction surgery, including corrective surgery techniques in foals and lambs
- conjunctival pedicle graft
- enucleation
- exenteration
- Candidates should have an appreciation of the other surgical techniques involved in treatment of common disorders of the outer eyelids, third eyelid, conjunctiva, lacrimal system, cornea (including foreign body penetration and full-thickness laceration with or without iris prolapse), orbit and globe
- The options available for surgical management of lens disorders (especially lens luxation and cataract), glaucoma and retinal detachment should be understood