# Programme Specification – 2016/17

| 1. Awarding body | University of Surrey |
| 2. Teaching institution (if different) | NA |
| 3. Final award and programme/pathway title | BVMSci Veterinary Medicine and Science |
| 4. Subsidiary award(s) and title(s) | 
| Award | Title |
| BSc (Hons) | Veterinary Science |
| BSc (Ord) | Veterinary Science |
| Dip HE | Veterinary Science |
| Cert HE | Veterinary Science |
| 5. FHEQ Level | 4 – 7 |
| 6. Credits and ECTS credits | 600 credits (300 ECTS credits) |
| 7. Name of Professional, Statutory or Regulatory Body (PSRB) | Royal College of Veterinary Surgeons (RCVS) |
| European Association Establishments for Veterinary Education |
| 8. Mode of study and route code | Mode of study | Route code |
| Full-time | Y | UCE30001 |
| Full-time with PTY | N |
| Part-time | N |
| Distance learning | N |
| Short course | N |
| 9. JACs code | RCVS Accredited Veterinary Programmes that comply with RCVS Day One Competency training. QAA benchmark statement: [http://qaa.ac.uk/Publications/InformationAndGuidance/Pages/Subject-benchmark-statement-Veterinary-science-.aspx](http://qaa.ac.uk/Publications/InformationAndGuidance/Pages/Subject-benchmark-statement-Veterinary-science-.aspx) |
| 10. QAA Subject benchmark statement (if applicable) | Final RCVS accreditation visitation will occur towards the end of the final year of the first cohort of students i.e. mid 2019 |
| 11. Other internal and / or external reference points | Faculty of Health and Medical Sciences, School of Veterinary Medicine |
| 12. Faculty and Department/School | Dr Kamalan Jeevaratnam |
| 13. Programme Leader | October 2016 |
| 14. Date of production/revision of the specification | |

## Educational aims of the programme

The aim of this programme will be to graduate students with skills, knowledge and attributes required for Membership of the Royal College of Veterinary Surgeons i.e. to achieve accreditation of the programme by the Royal College of Veterinary Surgeons. Specific educational goals are to produce competent and confident veterinarians with more than day One competencies and a good understanding of evidence based practice, the scientific process along with strong professional communication skills and technical competencies. The student will be encouraged to have a global perspective. As well as:

- To provide students with the opportunity to learn the breadth of the subject with emphasis on clinical science, veterinary pathology and research.
- To provide a fully-integrated programme with hands-on practical experience early in the
• To provide the appropriate environment to encourage the development of the students' interest in veterinary medicine and science and to help them acquire appropriate intellectual, scientific, technical and key transferable skills to promote self-directed and life-long learning.
• To provide a programme that is focused on the FAIR principles of education providing: Feedback, Active participation in learning, Individualisation and Relevance in a changing world.
• To provide clinical education through a distributed model of teaching that provides training by specialist and general veterinary practitioners.
• To provide an opportunity to gain experience, knowledge and research skills from our partner institutes, including the Animal Health and Veterinary Laboratories Agency, the Pirbright Institute and the Veterinary Medicines Directorate.
• To ensure a multidisciplinary approach to learning that encompasses veterinary clinical sciences, clinical training and comprehensive professional and business skills.
• To provide opportunities for international placements with our global partners in Brazil, the USA and other countries.
• To further the students' knowledge of the fundamental principles of veterinary medicine and to develop a deeper knowledge in the close relationship between human and animal health.
• To provide state of the art research training within world-leading veterinary research institutes and veterinary practices.
• To develop critical analytical skills in relation to identifying problems, formulating hypotheses, designing experiments, interpreting data and drawing conclusions.

16. **Programme learning outcomes** – the programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes as outlined by the Royal College of Veterinary Surgeons to enable registration as a member of the RCVS (MRCVS) as outlined below. There are alternative exit points after FHEQ level 4, Certificate level, FHEQ level 5, Diploma level and FHEQ level 7 Bachelors level. These are highlighted at the end of each year level in section 17.

### Knowledge and understanding

- The sciences on which the activities of a veterinarian are based.
- Research methods and the contribution of basic and applied research to all aspects of veterinary science.
- How to evaluate evidence.
- The structure and function of healthy animals, and all aspects of their husbandry.
- The aetiology and pathogenesis, clinical signs, diagnosis and treatment of the common disease and disorders that occur in the common domestic species in the UK.
- The legislation applicable to welfare of animals and notifiable diseases.
- Principles of drug actions and appropriate use of pharmaceutical agents.
- Medicines legislation and guidelines of their responsible use.
- Principles of disease prevention and promotion of health and welfare.
- Veterinary public health issues including zoonoses and food safety.
- Have a basic knowledge of the organisation and management of veterinary practice including basic human resources legislation, awareness of how fees are calculated, invoices drawn up and the importance of record keeping.

### Intellectual / cognitive skills

- Evaluate research findings and the scientific literature and demonstrate the ability to find and evaluate appropriate sources of material and to critically assess it.
- Demonstrate an understanding of research design and planning and the limitations of research findings.
• Recognise that statements should be tested and that evidence is subject to assessment and critical evaluation.
• Think independently, set tasks and solve problems.
• Ability to use information technology effectively to communicate, share, collect, manipulate and analyse information.
• Importance of complying with professional standards and policies of the practice.
• Understand the need for a commitment to continuing professional development throughout one’s professional life.
• Conduct oneself in a professional manner and understand and apply the ethical codes set out by the RCVS Guide to Professional Conduct.

Professional practical skills
• Obtain an accurate and relevant history of an animal or group and its environment.
• Handle and restrain an animal safely and humanely and instruct others in performing these techniques.
• Perform a complete physical examination.
• Attend all species in an emergency and provide basic first aid.
• Assess correctly the nutritional status of an animal and advise the client on principles of husbandry and feeding.
• Collect, preserve and transport samples, perform standard laboratory tests, and interpret the results.
• Use radiographic, ultrasonic and other technical equipment that can be used as a diagnostic aid safely and in accordance with regulations.
• Follow correct procedures after diagnosing notifiable, reportable and zoonotic diseases.
• Know and apply the RCVS twelve principles of certification correctly.
• Access the appropriate sources of data on licensed medicines; prescribe and dispense medicines correctly and responsibility in accordance with relevant legislation and ensure that medicines and waste are safely stored and/or disposed of.
• Correctly apply principles of sterilisation of surgical equipment.
• Correctly apply principles of aseptic surgery.
• Safely perform sedation, general and regional anaesthesia, implement chemical methods of restraint and assess and control pain.
• Advise on and administer appropriate treatment.
• Recognise when euthanasia is necessary and perform it humanely and sensitively.
• Perform a gross post mortem examination, record details, sample tissues, store and transport them.
• Perform an ante mortem examination of animals destined for the food chain.
• Assess and implement basic health and welfare records.
• Advise on and carry out, preventive and prophylactic programmes appropriate to the species and commensurate with accepted animal health, welfare and public health standards, seeking advice and assistance where necessary from professional colleagues.
• Minimise the risk of contamination, cross infection and accumulation of pathogens in the veterinary premises and in the field.

Key / transferable skills
• Communicate effectively with all stakeholders.
• Listen effectively to clients, respond sympathetically to clients and others using language that is context appropriate.
• Prepare clear case reports.
• Work effectively as a member of a team.
• Be aware of the ethical responsibilities of a veterinary surgeon.
• Be aware of the economic and emotional climate in which the veterinary surgeon operates.
• Be able to cope with uncertainty and adapt to change.
• Develop a capacity for self-audit and willingness to participate in the peer review process.
• Be aware of personal limitations and demonstrate awareness of when and from where to seek professional advice, assistance and support.

17. Programme structure - including the route / pathway / field requirements, levels modules, credits, awards and further information on the mode of study. Please see the student pathway document at the beginning of the programme structure section below. There are alternative exit points after FHEQ level 4, Certificate level, FHEQ level 5, Diploma level and FHEQ level 7 Bachelors level. These are highlighted at the end of each year level in this section.

Student Pathway through the programme (see calendar diagram page 43).
Upon entry to the programme in September of their first academic year, the Surrey veterinary student will have an orientation week to welcome them to the School, the University and the profession. This will enable the student to develop a sense of belonging to the University of Surrey community as well as meeting with their tutors and peers along with induction to the expectations of them as veterinary professionals.

The students will be introduced to key faculty and the student support staff and services available to them. They will be given guidance on the library and IT facilities as well as SPLASH for study skills support.

Year One Studies (FHEQ Level 4)
The study modules focus on the understanding of the normal animal’s development, structure and function as well as welfare and nutritional needs. The curriculum is based on body systems and, as such, includes material across species within each module. The students are also introduced to the veterinary profession, evidence based decision-making, information evaluation and start their communications training. They also gain some training in basic personal financial and stress management. Practical training will begin with normal anatomy and clinical examination of the normal animal. Students may start their AHEMS placements in the Christmas or Easter period or after the end of first year. They are required to complete 12 weeks of farm or husbandry placements (AHEMS) prior to the beginning of third year. PBL will be used to integrate between disciplines and highlight the clinical relevance of their basic science training. They will be introduced to the E-portfolio on SurreyLearn and how to use it to record their technical skills as well as to keep a journal of experiences and reflect upon these as part of their personal continuing growth as a professional.

Year Two Studies (FHEQ Level 5)
During the second year of study, the student will begin to appreciate variation from normal across species with much of their time being focussed on pathology and the various para-clinical sciences related to infectious disease. They will also study epidemiology and food science as they begin to understand infectious agents and processes. Practical skill development will focus on the abnormal and its assessment and documentation. Microbiology and pathology practicals will include food science considerations and ante-mortem inspection.

After Year Two, the students will still be involved in AHEMS to complete the RCVS 12-week requirement. They may also start the 6-week period of introductory EMS with clinicial practices, with two-week periods spent in farm, companion animal and equine practices as per RCVS requirements. Again, they will use their E-portfolio to record their achievements both technical and professional.

Year Three Studies (FHEQ Level 6)
The student will now begin to study clinical diseases, their diagnosis, prognosis and treatment across the body systems. They will also be involved in a year-long research project that will take about one day per week throughout the academic year. This year will see them introduced to the fundamentals of
practice namely imaging, pharmacology, surgery and anaesthesia. They will also continue with their communications and professional training. Practical skills include the techniques basic to practice, client interview technique as well as more depth in their physical examination and diagnostic skills. They will also further develop their researching and practical laboratory skills. They will continue to use their E-portfolio for recording technical and professional skills achievement.

**Year Four Studies (FHEQ Level 7)**

During this year the student will further integrate their clinical knowledge seeing the role of the veterinarian in various types of animal industries – namely extensive production animal, intensive production, laboratory, wildlife and exotic, companion animal and equine types of practice settings. The emphasis will be on the role of the veterinarian in maintaining wellness and good health by communicating the needs of their patients at various stages of their lifecycle in the various types of practice. Two modules will allow the student practice in surgery, anaesthesia and after care in a spay and neuter clinic setting. Two modules will cover broad topics related to wildlife conservation and contemporary issues in veterinary medicine and the roles of vets in society as leaders and educators. The student should be in a position to finish their clinical EMS after Year Four in preparation in Year Five for their IMR studies. It is possible that they may be able to do part of their elective rotation at this stage if they wish to combine it with an EMS component or travel overseas for a longer period of study. The E-portfolio continues as a formative tool.

**Year Five Studies (FHEQ Level 7)**

This year will see the student consolidate their clinical, professional and technical skills in practice and laboratory and food science and pathology settings during their respective IMR rotations. Each IMR module is 4 weeks in duration and there are three months periods spent in small animal practice settings with exposure to emergency and critical care, general practice and referral settings. Two months will be spent in equine practice settings, both referral and general practice, as well as a month in farm animal practice.

The pathology rotation is combined with the public health rotation for another month’s exposure. The elective rotation allows the student to gain more or varied experience in a setting of their choice as long as they have preauthorised and defined the learning outcomes for that rotation with the school in advance.

Assessments of the students during their IMR placements will be made by the practice hosts via an online competency scale, as well as evaluation of their E-portfolio by the University placement tutor. This tutor will be responsible for checking student progress at the half way mark of each rotation, or earlier if problems, to ensure that the student is on track for successful placement completion.

**Vertical integration within the curriculum.**

**Year One**

The very nature of the curriculum is integrated vertically by the nature of the delivery being systems based and the fact that the systemic structure is maintained over the first three years across most subject content. This lends itself to revisiting topics in a spiral nature gaining depth of understanding with each iteration. The clinical vertical integration of the programme begins in year one with the inclusion of clinicians in the teaching staff of the Animals In Society I module such that the clinical implications of behaviour on handling and practice can be appreciated by the students. Demonstrations of clinically relevant handling practices e.g. for restraint for venipuncture, or foot trimming, will be included in the practical sessions.

The Veterinary Professional also includes exposure of the students to veterinarians from various walks of life relating their career paths/ experience to the students to increase awareness of the protean pathways available to vets as graduates. They will also be exposed to speakers from the British veterinary association and support groups for practitioners.

In the Structure and Function modules, there will be clinical cases presented as PBL cases to highlight
the relevance of the anatomic structures and the physiological principles being studied in each module. These cases will be, or have already been, written by clinicians for exactly this purpose and the tutors for these sessions will be largely be clinicians.

There will be practical sessions with live animals in Semester 2, where physical examination will be taught for the system being covered in the Structure and Function modules. This is directly clinically relevant and will be taught by clinicians.

Similarly in Year 2 in the pathology modules, there will be clinical PBL cases used to underpin the relevance of the material being covered just as in Year 1. These cases form about 20% of the curriculum time.

Clinical epidemiologists will teach and give examples of the relevance of the material covered in Animals In Society II and again in Year 4 in Contemporary Issues. The basic science issues in these modules will have input from the preclinical scientists as needed for deeper understanding of the issues.

Year 3 is essentially clinically-oriented except for the research modules that may be very basic science based depending on the topic chosen by the student. Areas of pathophysiology covered here may well be taught by the basic scientists in the school. However, with the current staff hiring's, most of the basic scientists are also veterinarians with clinical experience, so will be able to demonstrate clinical relevance throughout their teaching. Similarly, most of our specialist clinicians have higher research degrees, so are very capable of including the basic science behind their clinical content in their teaching.

Year 4 integrates the various roles of veterinarians as educators and as such the communications training will re-emerge and be developed from the basic skills covered in Year One.

The curriculum is structured in such a way that no one subject is taught solely by subject area specialists in isolation and as such each module coordinator will need to get input from numerous individuals from differing backgrounds. As such the students will get a strong sense that each subject area does not lie solely within the purview of any one group of experts but draws on expertise from multiple disciplines.

The final year of the programme will revisit pathology and public health as well as consolidating the material from the preclinical and clinical years by exposure to both clinical and nonclinical settings. Again students may choose an elective in any area of expertise that they have touched on throughout the programme.

**Failure of progression**

An exit point is possible with a HE Certificate in Veterinary Science at the end of FHEQ level 4, a HE Diploma in Veterinary Science at FHEQ level 5 and the Bachelor of Science (ord or honours) degree at FHEQ level 6. Please see the table below for the learning outcomes at each level. Learning outcomes for each award also include the learning outcomes for the subsidiary awards.

**Years 1-4**

If a student fails modules of up to and including 45 credits (i.e. achieves below 50% pass mark for the BVMSSci programme) in the academic year they will be allowed an opportunity to resit these failed modules in the University’s late summer resit period. If the student then passes these modules the mark will be capped at the pass mark of 50% (unless there are extenuating circumstances - see handbook section in appendix). The student will then be allowed to progress to the next academic year.

If the student fails to remediate successfully the student will not progress to the next FHEQ level and will exit the BVMSSci programme. Depending on the number of academic credits accrued the student will exit with an intermediate exit award of the BVMSSci programme.
**Year 5**

In the final year of study (FHEQ Level 7) students are undertake a 120 credit intramural rotation module. There will be an opportunity for those who fail the exam or mini clinical evaluation exercises to resit these failed modules in the University’s late summer resit period. If the student then passes these modules and has completed the EMS requirement they will usually still be awarded the BVMSci that year. If students fail the portfolio component they will usually be required to programme suspend and resit the following academic year.

**University Programme Structural Requirements**

The BVMSci is studied over 5 academic years and is offered in full-time mode only.

On successful completion of the BVMSci programme, students may apply for membership of the RCVS (as long as the programme is accredited by this body) enabling them to practise as veterinary surgeons.

The Programme is divided into modules. All taught modules are worth 15 credits, which is indicative of 150 hours of learning, comprised of student contact, private study and assessment. In order to achieve the BVMSci, students must complete 600 credits at (FHEQ Levels 4,5,6,7)

Each year the students will undertake a total of 120 credits, divided across eight 15-credit modules for a total of 120 credits per year (with the exception of FHEQ Level 6 which has a 30 unit research module extending across both semesters, thus has 6 x 15 credits plus 1 x 30 credits = 120 credits).

In order for students to progress to FHEQ Level 7, they are required to achieve a minimum of (50%) in levels 4, 5 and 6. This is a professional body statutory requirement of the RCVS (PBSR).

The final year (Level FHEQ7) is comprised of 28 weeks of core intramural rotations (IMRs) and 4 weeks of elective IMR placements that may be taken in a wider range of settings dependent on authorisation of the placement host by the School. This may occur within the UK or overseas. The 32 week final year is a PSRB requirement.

*The students must also complete 12 weeks of animal husbandry extramural placements (AHEMS) prior to year three. There is also a requirement for a further 26 weeks of clinical extramural (EMS) placements in various clinical, public health or research settings between third and final years. (*This is a requirement of the RCVS for accreditation of the programme). This work should be completed prior to beginning the IMR placements in the student’s final year of study. The EMS placements are not part of the formal curriculum but will be assessed formatively by the placement coordinators via the portfolio maintained by the student during each placement. Whilst the programme is designed as a five-year programme in some circumstances, there may be exit point at the end of years one, two, three or four to gain a HE Certificate, HE Diploma or BSc (Ord or Hons) in Veterinary Science. These would be extraordinary exit points taken only by students unable to continue with progression to the completion of the BVMSci programme.

**Programme adjustments (if applicable)**

In order for students to progress to FHEQ Level 7 they are required to achieve a minimum of 50% on average across FHEQ Levels 4, 5 and 6. (Years 1, 2 and 3). These are requirements of the RCVS.

The 32 week IMR is a requirement of the RCVS.

There are few variants possible in the BVMSci programme as each year level must be completed prior to progression into the next. Content is cumulative and as such completion of all components in a year level must precede progression to the next level. The opportunities for variation within the programme lie in the selection of placements for AHEMS/EMS and the IMR elective rotations in the final year. By
consistent selection of a specific species or area of interest, it will be possible for a degree of focus in this chosen area by the student prior to graduation without diminution of the RCVS day one competencies.

FHEQ Level 4, Year 1: potential awards – Cert HE

<table>
<thead>
<tr>
<th>Module code</th>
<th>Module title</th>
<th>Core /compulsory /optional</th>
<th>Credit volume</th>
<th>Semester (1 / 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMS1001 (4)</td>
<td>Animals In Society 1</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>VMS1002 (4)</td>
<td>The Veterinary Professional</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>VMS1003 (4)</td>
<td>Structure and Function 1 - Cells and Genes in Context</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>VMS1004 (4)</td>
<td>Structure and Function 2 - Integument and Alimentary Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>VMS1005 (4)</td>
<td>Structure and Function 3 - Cardiovascular, Respiratory and Musculoskeletal Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>VMS1006 (4)</td>
<td>Structure and Function 4 - Haemopoietic and Neurological Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>VMS1007 (4)</td>
<td>Structure and Function 5 - Urological and Reproduction Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>VMS1008 (4)</td>
<td>Structure and Function 6 - Organs of Special Senses and Endocrine Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>

How many optional modules must a student choose in order to achieve the necessary amount of credits to achieve this level? NA

* Exit award learning outcomes for the Cert HE in Veterinary Science.

LO 4.1 Assess impact of handling and restraint on the animal’s welfare (K, T, P) RCVS 17
LO 4.2 Ensure appropriate hygiene procedures are followed when handling animals and use appropriate protective clothing (KTP) RCVS KU 9, RCVS KU 10
LO 4.3 Move and lift animals using approved manual handling and lifting techniques (P)
LO 4.4 Safely restrain animals of various ages for examinations, and manage and instruct others to assist in the handling and restraint of animals safely (KTP) RCVS 17
LO 4.5 Describe the basic nutritional needs of animals in various production systems (C,K) RCVS KU 1, RCVS KU 3, RCVS 21
LO 4.6 Define normal parameters for the vital signs (i.e. temperature, pulse rate, respiratory rate and capillary refill time) for the domestic species (i.e. horse, cattle, sheep, cats, dogs, rabbits, exotics) (KTP) RCVS KU 1, RCVS KU 3
LO 4.7 Apply basic scientific knowledge of cell biology and genetics to the context of the animal body (KTP) RCVS KU 1, RCVS KU 2
LO 4.8 Integrate topical scientific knowledge in genetics with clinical implications such as animal breeding for certain phenotype characteristics (KTP) RCVS KU 1, RCVS KU 2
LO 4.9 Apply physiological principles to understand homeostasis (KTP) RCVS KU 1, KU 3
LO 4.10 Gain basic scientific laboratory skills (TP) RCVS KU 2
LO 4.11 Understand the structure, function and development of the integumentary and gastrointestinal systems (KP) RCVS KU 1, KU 3
LO 4.12 Understand the anatomical and physiological differences of the GI tract in different species and how these relate to the animal’s diet (K, P) RCVS KU 1, RCVS KU 3
LO 4.13 Apply functional and structural knowledge of the integument and alimentary systems to basic clinical examination of veterinary species (CKTP) RCVS KU 1, RCVS KU 3
LO 4.14 Assess animal behaviour relating to the effects of pain and/or dysfunction of the GI system (K)
RCVS KU 18, RCVS 21, RCVS KU 9
LO 4.15 Formulate a hypothesis to explain the problem while gaining basic knowledge (CT) RCVS KU 1, KU 2
LO 4.16 Engage in higher-order thinking by evaluating prior knowledge with an understanding of the presented problem (CKTP) RCVS KU 1
LO 4.17 Organise their own group learning sessions (TP) RCVS KU 11
LO 4.18 Communicate effectively with their group (TP) RCVS KU 11
LO 4.19 Experience and participate in peer-group learning (KTP) RCVS KU 11
LO 4.20 Explain the relevance of “lifelong learning” to a veterinary professional – RCVS 14 (K, C)
LO 4.21 Describe concepts relevant to lifelong learning e.g. learning styles, Kolb’s cycle and reflection – RCVS 14 (K, C)
LO 4.23 Describe ways to overcome common roadblocks to learning – RCVS 14 (C, T)
LO 4.24 Discuss the five core components and three coordinating mechanisms of teamwork, according to Salas et al., 2005 – RCVS 7 (K)
LO 4.25 Demonstrate practical skills involved with effective teamwork – RCVS 7, RCVS 14 (C, T, P)
LO 4.26 Describe the steps involved in researching a clinical question – RCVS 9, RCVS 10 (K)
LO 4.27 Demonstrate information location and evaluation skills – RCVS 9, RCVS 10 (C, T, P)
LO 4.28 Describe what factors can contribute to stress in the veterinary profession – RCVS 12, RCVS 13 (K, C)
LO 4.29 Discuss the practical, effective coping strategies that can be used in dealing with stress – RCVS 8, RCVS 12, RCVS 13 (C, T, P)
LO 4.30 Describe what forms of mental health and wellbeing support are available to undergraduate veterinary students – RCVS 13 (K)
LO 4.31 Discuss the five principles of practice, as listed in the RCVS Code of Professional Conduct – RCVS 2 (K, C)
LO 4.32 Explain the professional responsibilities of a veterinary surgeon, as listed in the RCVS Code of Professional Conduct – RCVS 2 (K, C)
LO 4.33 Demonstrate competent use of personal financial planning tools e.g. budget – RCVS 8 (K, T, P)
LO 4.34 Describe what is meant by effective communication e.g.: appropriate interpersonal non-verbal behaviour; open and closed questioning; active listening; reflective listening; empathic communication (verbal and nonverbal), public speaking – RCVS 5 (K, T, P)
LO 4.35 Describe the different career paths that are available to veterinary graduates – RCVS 14 (K)

FHEQ Level 5, Year 2: Potential awards – Dip HE

<table>
<thead>
<tr>
<th>Module code</th>
<th>Module title</th>
<th>Core /compulsory /optional</th>
<th>Credit volume</th>
<th>Semester (1 / 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMS2001</td>
<td>Foundations of Disease 1 - General Pathology</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMS2002</td>
<td>Foundations of Disease 2 - Concepts of Infectious Disease</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMS2003</td>
<td>Foundations of Disease 3 - Pathology of the Integument and Alimentary Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMS2008</td>
<td>Animals In Society 2 Concepts in Epidemiology and Public Health.</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMS2004</td>
<td>Foundations of Disease 4 - Pathology of the Cardiovascular, Respiratory and Musculoskeletal Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMS2005</td>
<td>Foundations of Disease 5 - Pathology of the Haemopoietic and Neurological Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>
How many optional modules must a student choose in order to achieve the necessary amount of credits to achieve this level?

NA

*Exit point learning objectives for the Dip HE level*

LO 5.1 Explain the epidemiological principles of disease causation (K) RCVS KU 1, RCVS KU 9, RCVS KU 10

LO 5.2 Interpret results from epidemiological studies (C) RCVS KU 9, RCVS KU 10

LO 5.3 Discuss the role of economics in the allocation of scarce resources (K/C) RCVS KU 4, KU 12

LO 5.4 List the legislative requirements that are relevant to the production of safe food, and protection of the environment with respect to the impact of animal production (especially the HACCP regulations) (K) RCVS KU 10

LO 5.5 Discuss the risks to human health from important zoonoses in the home, food chain or environment, including occupational exposures and leisure activities and describe how these may be mitigated (K/C/P) RCVS KU 10

LO 5.6 Explain the principles of veterinary certification – RCVS 26

LO 5.7 Identify social and cultural factors that motivate people to change or that act as barriers to change (K/T/P) RCVS KU 10, RCVS KU 11

LO 5.8 Describe the basic mechanisms of disease and apply acquired foundation knowledge RCVS KU 1 (K,P), RCVS KU 22

LO 5.9 Understand what are the causes, development and consequences of disease by using the principles of disease: injury, adaptation, inflammation, repair, neoplasia, and their physiologic correlates (pathogenic mechanisms) RCVS KU 1 (K,T,P)

LO 5.10 Perform a necropsy, to identify common incidental findings during the necropsy and in photographs, recognize abnormal findings (lesions) and write a concise necropsy report by using proper medical terminology and use appropriate tools for collecting data (photographic images) RCVS 35 (C, K,T,P) RCVS KU 5

LO 5.11 Describe lesions using appropriate terminology. RCVS 35 (K,T,P)

LO 5.12 Determine the molecular basis for pathological damages from cells to organs and whole body systems and describe and interpret pathological changes occurring at the cellular and organ level and understand the commonality of the disease process across species including concepts of One Health, One Medicine RCVS KU 1, RCVS KU 5 (C, K, T, P) RCVS KU 1 (K,T,P) RCVS KU2

---

FHEQ Level 6, Year 3: Potential awards – BSc (Hons) / BSc (Ord)

<table>
<thead>
<tr>
<th>Module code</th>
<th>Module title</th>
<th>Core /compulsory /optional</th>
<th>Credit volume</th>
<th>Semester (1 / 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMS3001 (6)</td>
<td>Research Module</td>
<td>Compulsory</td>
<td>30</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS3002 (6)</td>
<td>Fundamentals of Veterinary Practice – Introduction to Pharmacology, Anaesthesiology, Imaging and Surgery</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>VMS3003 (6)</td>
<td>Clinical Practice 1 – Diagnosis, Prognosis, Treatment - Integument</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Module Code</td>
<td>Module Title</td>
<td>Credit Value</td>
<td>Level</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>VMS3004 (6)</td>
<td>Clinical Practice 2 – Diagnosis, Prognosis, Treatment - Cardiovascular, Respiratory, and Musculoskeletal Systems</td>
<td>Compulsory 15</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>VMS3005 (6)</td>
<td>Fundamentals of Veterinary Practice 2 – Practice Management, Ethics, Law, Communications and Career Choices</td>
<td>Compulsory 15</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>VMS3006 (6)</td>
<td>Clinical Practice 3 – Diagnosis, Prognosis, Treatment - Haemopoietic, Neurological, Endocrine and Organs of Special Sense Systems</td>
<td>Compulsory 15</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>VMS3007 (6)</td>
<td>Clinical Practice 4 – Diagnosis, Prognosis, Treatment - Urological and Reproductive Systems</td>
<td>Compulsory 15</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

How many optional modules must a student choose in order to achieve the necessary amount of credits to achieve this level?

NA

* Exit point learning objectives for BSc level

LO 6.1 Use electronic databases critically to selectively access information (T) RCVS KU 1, RCVS KU 2, RCVS KU 10
LO 6.2 Interpret and assess the relevance of scientific literature (T/P) RCVS KU 1, RCVS KU 2, RCVS KU 10
LO 6.3 Demonstrate an in-depth knowledge and critical understanding of the research project topic, informed by current scholarship and research (K) RCVS KU 2, RCVS KU 1
LO 6.4 Show a capacity for independent research (P/C) RCVS KU 10, RCVS KU 2
LO 6.5 Demonstrate the ability to analyse and interpret research data (C) RCVS KU 10, RCVS KU 2, RCVS KU 1
LO 6.6 Write a detailed and well-constructed scientific report (T/P/C) RCVS KU 10, RCVS KU 2
LO 6.7 Present research findings orally in a structured and scientific manner, including responding to questions relating to background material, data analysis and interpretation of results (T/C/P) RCVS KU 2, RCVS KU 10, RCVS KU 11
LO 6.8 Be confident in their transition to practice in the areas above armed with the basic practical skills and the theory underpinning their practice and knowledge of the relevant legislation and restricted drug use. (C,K,T,P) RCVS KU 1, RCVS 27, RCVS 29
LO 6.9 Safely operate radiology equipment prior to beginning their clinical EMS rotations (K,T,P) RCVS 24
LO 6.10 Safely conduct themselves in an operating theatre, using appropriate attire and self-positioning and movements (C,K,T,P) RCVS 30, RCVS 31
LO 6.11 Perform suture techniques relevant for the various species (K,T,P) RCVS 31
LO 6.12 Ensure safe behaviour and operation in the handling of anaesthetic drugs and equipment (K,T,P) RCVS 29, RCVS 29, RCVS 8
LO 6.13 Understand and apply the regulations relating to drug use and handling in the profession, drug withdrawal times for production animals, restricted and scheduled drugs and their handling (K,T,P) RCVS 32, 33, RCVS 27, 29, RCVS 8
LO 6.14 Demonstrate what is meant by relationship-centred and paternalistic medicine RCVS 1, 5 (K,T,P) RCVS KU 11
LO 6.15 Demonstrate the importance of four key communication skills: non-verbal skills, open-ended enquiry, reflective listening, empathy and the relative importance of verbal and non-verbal
LO 6.16 Demonstrate the key skills needed for the stages of the Calgary Cambridge framework (C,T,P,K) RCVS 5, RCVS KU 11
LO 6.17 Develop a deep understanding of the diseases and injuries that affect the various body systems, perform clinical examinations in different species and carry out and interpret ancillary tests RCVS 18 (KP) RCVS KU 5
LO 6.18 Obtain an accurate and relevant history of the animal(s) and environment (KP) RCVS 5
LO 6.19 Establish the differential diagnosis through the use of the appropriate diagnostic techniques to arrive at the definitive diagnosis, evaluate and communicate short and long-term prognosis RCVS 34, RCVS 18, RCVS 22, RCVS 24 (CKP) RCVS KU 5, KU11, KU 9
LO 6.20 Describe the role and obligations of the veterinarian in animal welfare and the RCVS stand on ethics in the veterinary profession RCVS KU 12 (P) RCVS 1

FHEQ Level 7, Year 4 AND 5: Potential awards – BVMSci / BSc (Hons)

<table>
<thead>
<tr>
<th>Module code</th>
<th>Module title</th>
<th>Core /compulsory /optional</th>
<th>Credit volume</th>
<th>Semester (1 / 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMS (7)</td>
<td>Fundamentals of Veterinary Practice 3 &amp; 4 – Spay and Neuter Clinic</td>
<td>Compulsory</td>
<td>30</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Clinical Practice 5 – Intensive Production and Laboratory Animal Systems</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Wildlife Health and Disease</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Clinical Practice 6 – Equine</td>
<td>Compulsory</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Clinical Practice 7 – Companion Animal</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Clinical Practice 8 – Production Animal</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Contemporary Issues in Veterinary Medicine – Emerging Diseases, Public Health and Sustainability</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>

*Year 5 Intramural Rotations*

Each module will be offered throughout the year except for the elective rotations

<table>
<thead>
<tr>
<th>Module code</th>
<th>Module title</th>
<th>Core /compulsory /optional</th>
<th>Credit volume</th>
<th>Semester (1 / 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMS (7)</td>
<td>Small Animal General Practice 1 (4 weeks)</td>
<td>Compulsory</td>
<td>15</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Small Animal General Practice 2 (4 weeks)</td>
<td>Compulsory</td>
<td>15</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Small Animal Referral Surgery, Anaesthesiology, Imaging and Neurology (4 weeks)</td>
<td>Compulsory</td>
<td>15</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Equine General Practice (4 weeks)</td>
<td>Compulsory</td>
<td>15</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Consolidation elective (4 weeks)</td>
<td>Compulsory</td>
<td>15</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Veterinary Pathology and Public Health (4 weeks)</td>
<td>Compulsory</td>
<td>15</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Production Animal (4 weeks)</td>
<td>Compulsory</td>
<td>15</td>
<td>1 and 2</td>
</tr>
<tr>
<td>VMS (7)</td>
<td>Electives (2 x 2 or 4 weeks)</td>
<td>Compulsory</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>

How many optional modules must a student choose in order to achieve All are compulsory so all must be completed. There are two opportunities for remediation on modules prior to the capstone OSCE assessment at the end of year 5. If more than two rotations are failed then the entire year
the necessary amount of credits to achieve this level? 5 may need to be repeated.

**LOs for year 4 of the programme (LO 7.0)**

- **LO 7.1** Combine interdisciplinary knowledge across all the basic scientific and clinical subjects to understand the performance of safe anaesthesia and sterile surgery (C,K,P) RCVS KU 5, RCVS 30, RCVS 31, RCVS 32, 33
- **LO 7.2** Demonstrate their technical skills in the safe performance of anaesthetic equipment and neutering surgery (K,P) RCVS 30, 31, RCVS 32, 33
- **LO 7.3** Demonstrate their competence in performing a clinical examination and pre-anaesthetic assessment of a small animal (C,K,T,P) RCVS 6, 16, 17, 21, 22, RCVS KU 3 & KU 5
- **LO 7.4** Assess animal behaviour, considering the effects of pain perioperatively and communicate the needs for the care of the animal to the owner or agent. (C,K,T,P) - RCVS 30, 31, RCVS KU 5
- **LO 7.5** Assess and manage the disorders seen in intensively raised and laboratory animals related to their signalment by age, gender and breed. (K,T,P) - RCVS KU 5, RCVS 22, RCVS 25, RCVS KU 3
- **LO 7.6** Describe and demonstrate the role of preventive medicine in veterinary practice as it relates to intensively raised and laboratory animals. (C,K,T,P) RCVS KU 5, KU9
- **LO 7.7** Define and discuss the roles of the veterinarian as an educator and advocate for welfare and wellness of the animals in their care relevant to laboratory animals and intensively produced animals (C,K,T,P) RCVS KU 3, KU 9, KU11
- **LO 7.8** Explain the relevance of biodiversity and ecosystem health to sustainable livestock farming and human prosperity, discussing the linkage of wildlife, domestic animal and human health – ecosystem health and One Health concept with regard to wildlife health and disease. (K,P) RVS KU 6, KU 9, KU 4
- **LO 7.9** Discuss the challenge of allocation of resources for conservation. Ex situ and in situ conservation; proximate and ultimate drivers of extinction (e.g. susceptibility to disease outbreaks vs habitat loss/fragmentation) (K,P) RCVS KU 4, KU 6, KU 12
- **LO 7.10** Explain concepts of population dynamics and role of disease in wildlife populations (e.g. micro- and macro-parasites are part of biodiversity; disease as a threat to wildlife populations) and discuss epidemiology and impact of disease on wildlife populations. Why some populations are more vulnerable than others (Population Viability Analysis); pathogen pollution; anthropogenic drivers of disease emergence. (K,P) KU 5, KU10, KU3
- **LO 7.11** Recommend appropriate interventions for management of wildlife diseases (e.g. vaccination, movement restriction, culling, translocations) and discuss associated ethical, welfare, economic and logistical issues (e.g. bovine TB in badgers; fox rabies in Europe; wildlife rehabilitation centres) (K,P) KU 10
- **LO 7.12** Evaluate methods to detect and monitor disease in wildlife populations, and interpret the results given biases in surveillance design and critically interpret surveillance data concerning emerging diseases from wildlife populations. (C,K,T,P) KU 10
- **LO 7.13** Explain the importance of wildlife zoonoses and stages in disease emergence (Wolfe et al paper) and potential for occupational risks to veterinary practioners (C,T,K,P) KU 6, KU 7, KU 10
- **LO 7.14** Describe and develop management plans for the disorders seen in equine patients related to their signalment by age, gender and breed. (K,T,P) RCVS KU 5, RCVS 16, 18, 22
- **LO 7.15** Describe and implement a preventive medicine plan in equine veterinary practice setting. (C,K,T,P) RCVS KU 16, 17
- **LO 7.16** Describe and be able to enact the role of the veterinarian as an educator and advocate for welfare and wellness of the animals in their care especially relevant to equine species. (C,K,T,P) RCVS 2, 6, 16, 17, RCVS KU 5, KU 6, KU 9
- **LO 7.17** Describe and develop a management plan for the disorders seen in companion animals related to their signalment by age, gender and breed (K,T,P) RCVS KU 5, RCVS 22, RCVS 25
- **LO 7.18** Describe and enact the role of preventive medicine in companion animal veterinary practice (C,K,T,P) RCVS KU 9
- **LO 7.19** Describe and enact the role of the veterinarian as an educator and advocate for welfare and wellness of the animals in their care especially relevant to companion animals KU 7, KU 9, KU 11, RCVS 2,6,16,17 (C,T,K,P)
- **LO 7.20** Describe and develop a management plan for the disorders seen in production animals related
to their signalment by age, gender and breed (K,P) RCVS KU 5, RCVS 22, RCVS 25
LO 7.21 Describe and enact the role of preventive medicine (herd health) in production animal practice (CKTP) KU 9, 10
LO 7.22 Describe and enact the role of the veterinarian as an educator and advocate for welfare and wellness of the animals in their care especially relevant to production animals (CKTP) RCVS 2,6,16,17,KU7, KU 11
LO 7.23 Appreciate the framework and regulations that govern the safe international trade in animals and animal products and the role of organisations including the World Trade Organisation and the OIE in developing these regulations (C,K,T,P) RCVS KU 1, KU 2, KU 6, KU 7, KU 9
LO 7.24 Design, conduct and evaluate the results from a literature search for a contemporary issue, including peer-reviewed and grey literature (C,K,T,P) RCVS KU 1, KU 2, KU 11, KU 12
LO 7.25 Analyse international surveillance data, including the identification and description of sources of bias RCVS (C,K,T,P) RCVS KU 1, RCVS KU 2, KU 5, KU 9, KU 10
LO 7.26 Debate contentious issues in a rational and professional manner, including with others who may take extreme positions (C,T,K,P) RCVS 1, 15 KU 11, KU 12
LO 7.27 Develop influencing skills that are compatible with an evidence-based, welfare conscious and professional approach that can be employed to shape policy and decision-making (C,T,P,K) RCVS 13, KU 1, KU 2, KU 11, RCVS 1, RCVS 10, RCVS 14

Year 5 LOs from the IMR sessions (IMR 7.0)
IMR LO 7.1 Demonstrate communication skills to obtain a thorough clinical history and communicate a plan to the client - RCVS 2, 5, 6, 7, 8, 13, 16 RCVS KU 8, KU 9, KU 11 (K,T,P)
IMR LO 7.2 Competently handle and restrain companion animals and perform a complete physical examination in a manner that minimises stress and potential injury to the animal, clients and staff. - RCVS 17,18 (K,T,P)
IMR LO 7.3 Identify, define, and prioritise problems and develop prioritised problem lists, synthesise a list of differential diagnoses, and communicate appropriate diagnostic plans based on the differential diagnoses and economics - RCVS 6, RCVS KU 5 (K, C, T, P)
IMR LO 7.4 Obtain samples, competently perform and interpret diagnostic tests (e.g. blood sampling, faecal collection) and understand sample handling and labelling - RCVS 22 (K, C, T, P)
IMR LO 7.5 Calculate drug doses and administer medication under supervision RCVS KU 5, KU 8 (K,T, P)
IMR LO 7.6 Competently prepare a patient for surgery by clipping, cleaning and draping the surgical site and the surgeon by correctly applying principles of aseptic surgery; preparing for surgery by scrubbing, gowning and gloving in an aseptic manner - RCVS 30, 31 (K.T, P)
IMR LO 7.7 Identify, define, and prioritise problems including triage of emergency patients and recognise and assist with treatment of common emergency and critical care patients by effectively implementing first aid for a variety of species - RCVS 20 (C,K,T,P)
IMR LO 7.8 Interpret radiographs and prepare a list of differential diagnosis - RCVS 24, KU 5 (K,C,T,P)
IMR LO 7.9 Be aware of the methods of assessment and methods of pain amelioration in surgical or neurological patients - RCVS 32, 33 (C,K,T,P)
IMR LO 7.10 Perform a neurological examination to localise a neurological lesion(s) and be able to establish a differential diagnosis list and possible prognoses for same - RCVS KU 3. KU 5
IMR LO 7.11 Understand the various reasons for referral of cases and the correct steps timing and professional requirements involved – RCVS 23
IMR LO 7.20 Appreciate the multiple roles of the veterinarian in the protection of the food chain (K. C, T, P) RCVS KU 6, KU 9, KU10
IMR LO 7.21 Be able to develop a plan for lessening the risk of disease transmission in various food related scenarios RCVS KU 9, KU 10, KU 11 (K. C, T, P)
IMR LO 7.22 Recognise important veterinary public health issues, and the role that veterinary surgeons play in recognizing and addressing problems of public health importance. RCVS KU 5, KU7, KU 9, KU 10 (K. C, T, P)
IMR LO 7.23 Develop a response plan in the event of a public health emergency, such as a natural disaster, disease outbreak, or a bioterrorist attack. RCVS KU 9, KU 10, KU 11 (K. C, T, P)
IMR LO 7.24 Discuss the different types of surveillance and their strengths and limitations. RCVS KU 10, KU 11 (K, C, T, P)
18. Opportunities for placements / work-related learning / collaborative activity – please indicate if any of the following apply to your programme

<table>
<thead>
<tr>
<th>Associate Tutor(s)/Guest Speakers/Visiting Academics</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>External examiners (3 individuals per year)</td>
<td>Y</td>
</tr>
<tr>
<td>Professional Training Year (PTY)</td>
<td>N</td>
</tr>
<tr>
<td>Placement(s) (study or work that are not part of the PTY or Erasmus Scheme)</td>
<td>Total of 38 weeks, 26 weeks of EMS + 12 weeks of AHEMS.</td>
</tr>
<tr>
<td>Clinical Placement(s) (that are not part of the PTY Scheme)</td>
<td>Y ie IMR year 5</td>
</tr>
<tr>
<td>ERASMUS Study (that is not taken during Level P)</td>
<td>Y – IMR elective during year 5</td>
</tr>
<tr>
<td>Study exchange(s) (that are not part of the ERASMUS Scheme)</td>
<td>N</td>
</tr>
<tr>
<td>Dual degree</td>
<td>N</td>
</tr>
<tr>
<td>-------------</td>
<td>---</td>
</tr>
<tr>
<td>19. Quality assurance</td>
<td></td>
</tr>
</tbody>
</table>

The *Regulations* and *Codes of Practice* for taught programmes can be found at: [http://www.surrey.ac.uk/quality_enhancement/index.htm](http://www.surrey.ac.uk/quality_enhancement/index.htm)